TOON BOOM

STORYBOARD PRO

THE POWER OF DIGITAL STORYBOARDING

Toon Boom Storyboard Pro 4.1 User Guide

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Chapter 1: Introduction

Storyboard Pro is a complete storyboarding software for animated features and TV series, 2D/3D, live action production, video games, or events with advanced features for all your project's needs.

Whether you are planning an animation, a live action production or an event, Storyboard Pro takes care of your entire storyboard and animatic project. From importing your script and images, drawing, editing captions, all the way to layer and camera movements and sound editing.

Set up your project planning in a true 3D space. With 3D model import, positioning of 2D assets within the 3D space and impressive 3D camera movements.

Storyboard Pro features an extensive set of drawing tools and export options that range from PDF, images, movie files and even third party editing software to fit all of your sharing and production needs.

To learn all about the features available in Storyboard Pro and how to use them in a production context, refer to the following chapters:

- *Getting Started* on page 29
- *Discovering the Interface* on page 53
- *Script and Panels* on page 95
- *Drawing* on page 175
- *Working in a 3D Space* on page 257
- *Adding Colour* on page 289
- *Layers* on page 151
- *Libraries* on page 309
- *Animatic* on page 331
- *Pitching Your Storyboard* on page 413
- *Storyboard Supervision* on page 427
- *Exporting Your Storyboard* on page 439
- Keyboard Shortcuts For

About Storyboarding

Storyboarding is one of the most crucial steps in any production. It is when you plan and build your scenes in accordance with the script, actions, and limitations. The storyboard is like the blueprint of your production.

- *How to Prepare for Storyboarding* on page 25
- *Storyboard Basics - Recommended Steps* on page 26

How to Prepare for Storyboarding

Planning ahead can save you time and effort. While storyboarding will save you considerable time during production, some additional planning of your storyboard project will further streamline your workflow.

Including storyboarding in your project planning will allow you to meet a number of production goals, such as:

- Providing a common visual road map to which a team can refer
- Reducing overall production time

- Reducing the likelihood that production resources are not used on scenes that will eventually be deleted

Using the same logic, taking steps to plan how you will storyboard also eases this early part of production.

Before you begin storyboarding, consider the factors that will affect your storyboard project and your final production.

The Script

Create a complete or well-developed script. The more complete your screenplay is, the easier your ideas will be to storyboard. Storyboarding is also beneficial for completing a script that is in the last stages of development, as it can often help to resolve remaining storytelling issues. For example, storyboarding can highlight the need for modifications to transitions between scenes, or for scenes you did not realize were missing, but need to be inserted to enhance the flow of action.

The Structure

Consult your script, try to visualize it as a series of scenes, and decide which ones can be placed into panels in your future storyboard. You still do not need to draw anything at this point; you just want to assess if there is a smooth, logical visual flow to the story, and get an idea of the type of scenes that will work in your production.

Breaking down your script into smaller components produces a more manageable structure to work with.

The Delivery

How will your final production be broadcast? Is it designed for television, HDTV, or widescreen film? Will it be watched on an iPad, tablet, or mobile device? All of these factors determine the aspect ratio of the final production. The size and dimensions of your production will determine the level of detail and how your scenes are composed.

Assume the viewer's role for a moment, and try to determine how your project will be best viewed in its final medium.

Storyboard Basics - Recommended Steps

There are three recommended steps when preparing your storyboard project:

Following these steps will help you develop a clear vision of how you want your production to look, feel, and flow. Anyone viewing your storyboard should be able to follow its story in a clear, logical manner by looking at the visual and textual information.

Script Analysis and Breakdown

Break down your script into a series of scenes. The action in a panel is usually composed of the action, dialogue, and effects that occur between a camera being turned on until it is turned off. Typically, a scene can be expressed in a single panel, but more elaborate or complex scenes may require multiple panels.

Before beginning your storyboard, you should analyse your script to find out if it is possible to produce a storyboard using the current structure. You will already have an idea of some of the scenes you will want to use based on the script, structure, and delivery requirements.

Taking into consideration these factors early on will make this step even easier and more productive. Using the information from your analysis, determine the scenes that you will require for the production. At this stage, you may not necessarily have information on every detail of the scene, like the camera angle, composition, lighting or type of scene, but if you have some of this information, you can include it. What is more important is the development of the sequence of the scenes. Create a unique panel or write notes for each scene that you intend to use in your production.

Dividing your script into smaller parts will make the job of determining scenes easier.

Scene Evaluation

Determine the important elements of each scene.

The elements you need to determine are:

- Camera angles and movements
- The direction of movement of objects within a scene
- The mood you want to create

Now that you have broken down your script into separate scenes and have laid out the sequence of scenes in separate storyboard panels, you are ready to determine the most effective scene to use in each panel to convey the type of story you are trying to tell. Your storyboard panel should convey the most important aspects of the scene and you should create each scene to maximize its intended impact. You will need to make a number of decisions, independently or with a partner or team.

Some of the issues to determine are:

- Which characters are in the scene and their position
- Which props are in the scene and their position
- Whether or not you need to include certain elements to maintain continuity between other scenes
- How objects and characters move during the scene
- Where the camera is positioned and expected changes in camera movement during the scene
- What type of lighting is required for the scene
- What type of special effects may be required for the scene
- How accompanying dialogue or narration will be integrated into the scene

Creating Scene Lists

Create an itemized list of each scene used in key sequences or your entire story. With a clearer idea of the sequence and composition of your scenes, you can plan how much you want to storyboard. You can storyboard your

entire production. Alternatively, you can storyboard scenes that are pivotal to the emotional impact of the story or that may require a more complex setup. Create a scene list for your production, which, for each scene, details the important elements you worked out during your evaluation of the scenes. You should include the scene's type and angle, camera effects, lighting, and accompanying dialogue. Entries in the scene list can then be used to complete storyboard panels. These provide you with a guideline to create an informative visual narrative for your production.

Chapter 2: Getting Started

Once the software is installed, you are ready to start Storyboard Pro.

This chapter includes the following topics:

- *Starting Toon Boom Storyboard Pro* on page 29
- *The Welcome Screen* on page 29
- *Creating a Scene* on page 40
- *Project Properties* on page 40
- *Project Optimization* on page 46
- *Regenerating Thumbnails* on page 49
- *Backing Up Projects* on page 50
- *Basic Commands* on page 51

Starting Toon Boom Storyboard Pro

You can run the software on the Mac OS X or Windows operating systems.

To start Storyboard Pro:

1. Double-click the Storyboard Pro ◎ icon or do one of the following:

   ‣ **Windows**: Select **Start > Programs > Toon Boom Animation > Toon Boom Storyboard Pro > Storyboard Pro.**

   ‣ **Mac OS X**: Select **Applications > Toon Boom Storyboard Pro > Storyboard Pro**.

   Storyboard Pro opens and the Welcome screen is displayed.

The Welcome Screen

When you open Storyboard Pro, the Welcome screen appears. If a scene is already open, you can display the Welcome Screen by selecting **Help > Show Welcome Screen**.
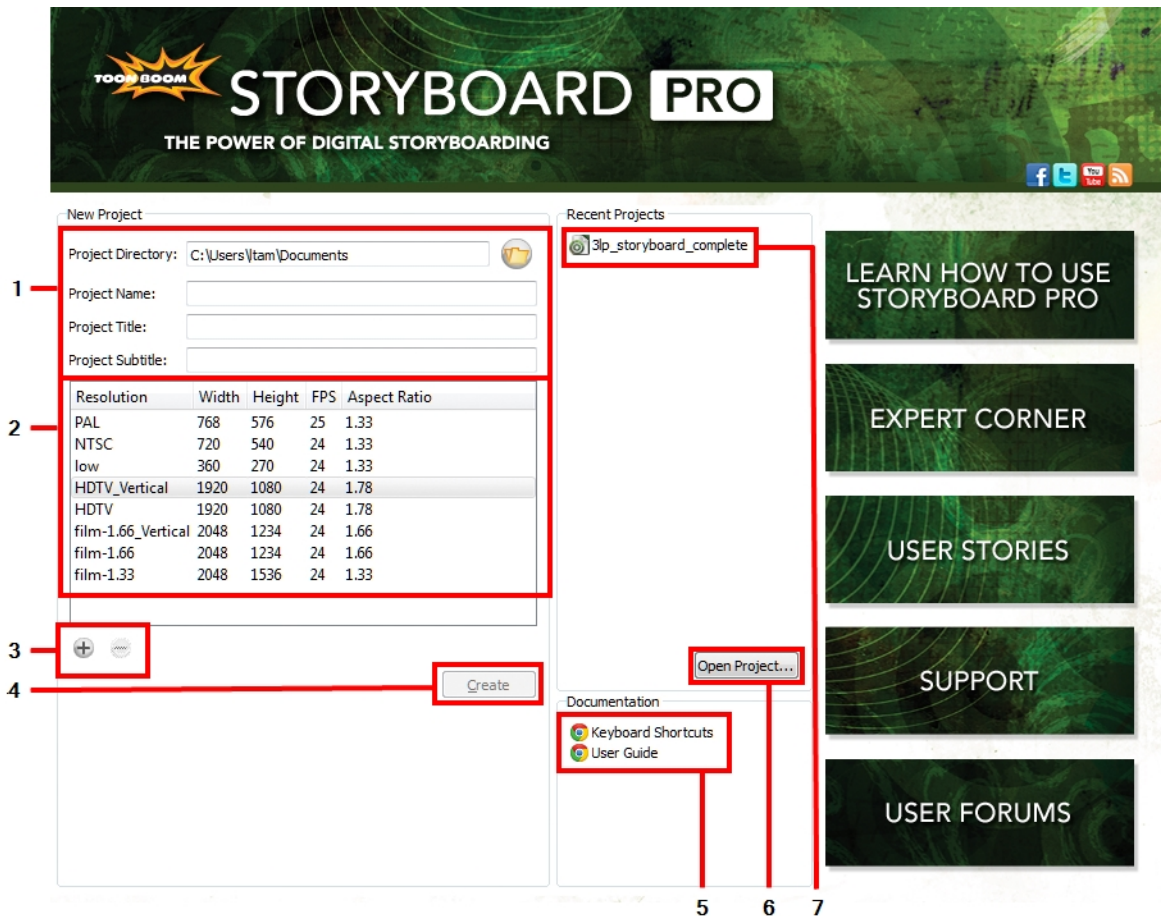
The Welcome screen lets you:

1. Create and name projects

2. Choose the project resolution

3. Add or delete a custom project resolution

4. Create a new project.

5. Access the documentation

6. Open projects by browsing

7. Open recent projects from a list

Accessing the Documentation

To access the documentation, do one of the following:

- ▸ **From the Welcome screen**: In the Documentation section, click a Help document.
- ▸ **Directly in the software**: From the top menu, select **Help > Help**.
- ▸ **Windows**: **Select Start > Programs >Toon Boom Animation > Toon Boom Storyboard Pro > Documentation.**
- ▸ **Mac OS X:** Select **Applications > Toon Boom Storyboard Pro > Documentation**.

Creating and Opening a Project

All projects created with Storyboard Pro are independent and local to the computer. There are a few different ways to create and open projects.

This section includes the following topics:

Using the Welcome Screen

To create a project from the Welcome Screen:

1. Select a project folder by clicking the Browse 📁 button.

2. In the Project Name field, type the name of the project. This name will appear as the file name.

3. In the Project Title field, type the name of the project title. It is a good idea to use the Project Name for the Project Title. You can also type in the name of the Project Subtitle, but it is not mandatory. These titles will appear on the appropriate pages of PDF exports.

4. In the Resolution section, choose the project's resolution, or continue to step 5 to add a new resolution to the list.

Resolution	Width	Height	FPS	Aspect Ratio
PAL	768	576	25	1.33
NTSC	720	540	24	1.33
low	360	270	24	1.33
HDTV_Vertical	1920	1080	24	1.78
HDTV	1920	1080	24	1.78
film-1.66_Vertical	2048	1234	24	1.66
film-1.66	2048	1234	24	1.66
film-1.33	2048	1536	24	1.33

5. Click the Add ➕ button to add a new resolution to the list.
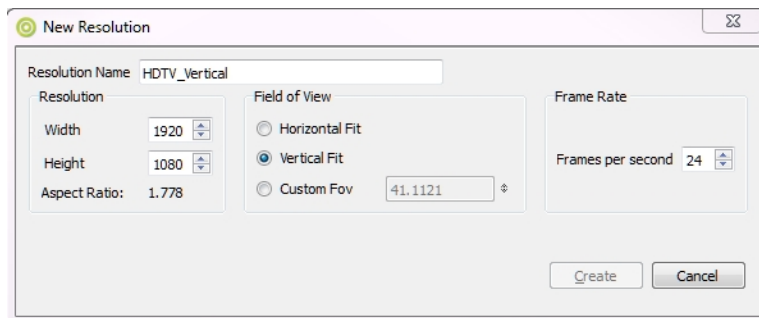
   The New Resolution box opens.

New Resolution	
Resolution Name	HDTV_Vertical

   Resolution
   Width: 1920
   Height: 1080
   Aspect Ratio: 1.778

   Field of View
   ○ Horizontal Fit
   ● Vertical Fit
   ○ Custom Fov 41.1121

   Frame Rate
   Frames per second: 24

   Create   Cancel

   ‣ **Resolution Name:** Type a name for your new resolution.

   ‣ **Width/Height**: Enter the resolution width or height in pixels. These two parameters are linked; changing one changes the other.

‣ **Field of View**: Set the field of view to use the horizontal or vertical resolution, or enter a custom field of view.

‣ **Frames per second**: Type the scene's frame rate per second.

> **NOTE:** You can delete a custom resolution from the Resolution List by selecting it and clicking the Delete button under the Resolution window.

6. Click **Create**.

To open a project from the Welcome screen:

1. In the Recent Projects section, click **Open Project**.

Recent Projects
Meeting_On_The_Mound
Bus_Capella
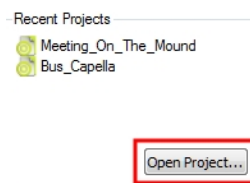
Open Project...

The Open Project browser opens.

2. Browse and select the desired *.sboard file.

3. Click **Open**.

To open a recent project from the Welcome screen:

1. In the Recent Projects section, select a project from the list.

Recent Projects
Meeting_On_The_Mound
Bus_Capella

The selected project appears in Storyboard Pro.

> **NOTE:** Toon Boom Storyboard Pro has an optimized file structure that has reduced number of folders. For this reason, **once a project is saved in this version, it can no longer be opened in Storyboard Pro 2**. However, Toon Boom Storyboard Pro is fully backwards compatible and will open files created by older versions of Storyboard ProCreating a New Project or Opening an Existing Project

The File menu features the commands that allow you to either create a new project or open an existing one. If a project is already open and you want to create a new one, you can use the File menu.

To create a project from the File menu:

1. Do one of the following:

‣ Select **File > New.**

‣ In the File toolbar, click the New ☐ button.

‣ Press [Ctrl]+[N] (Windows) or [⌘]+[N] (Mac OS X).

The New Project dialog box opens.

2. In the Project Directory field, specify the location of your new project.

3. In the Project Name field, type the name of the project. This name will be used as the file name.

4. In the Project Title field, type the name of the project title. It can be a good idea to use the Project Name for the Project Title.

   You can also type in the name of the Project Subtitle, but it is not mandatory. These titles will appear on the appropriate pages of PDF renders.

5. In the Resolution section, do one of the following.

   ‣ Choose the project's resolution. By default, the resolution is set to HDTV_Vertical.

   ‣ Click the Add + button to add a new resolution to the list.

   The New Resolution box opens.

- **Resolution Name:** Type a name for your new resolution.
- **Width/Height**: Enter the resolution width or height in pixels. These two parameters are linked; changing one changes the other.
- **Field of View**: Set the field of view to use the horizontal or vertical resolution, or enter a custom field of view.
- **Frames per second**: Type the scene's frame rate per second.

> NOTE: You can delete a custom resolution from the Resolution List by selecting it and clicking the Delete button under the Resolution window.

6. Click **Create**.

To open a project from the File menu:

1. Do one of the following:

   ‣ Select **File > Open.**

   ‣ In the File toolbar, click the Browse button.

   ‣ Press [Ctrl]+[O] (Windows) or [⌘]+[O] (Mac OS X).

   The Open Scene browser opens.

2. Browse and select the desired `*.sboard` file.

3. Click **Open**.

Using a Final Draft Script to Create a New Project

Storyboarding and script writing go hand-in-hand. Storyboard Pro lets you use your Final Draft script to create a new Storyboard Pro project. This feature is an amazing time saver as it handles the creation of scenes and panels, as well as inserting all the text in the proper captions automatically.

Creating a New Project from a Final Draft Script

To import a Final Draft script:

1. From the top menu, select **File > New From Final Draft Script**.

   The Import from Final Draft window opens.

2. Use the Browse button to search for an *.fdx or *.xml file exported from Final Draft. After making a file selection, the other options in the window become active.
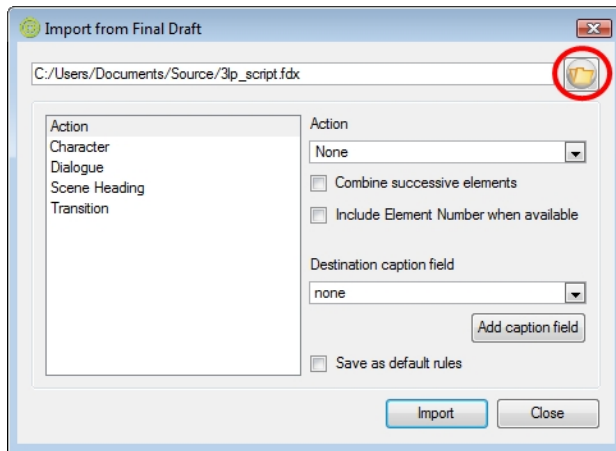
3. Select a tag from the left column, then select an item from the Action menu.
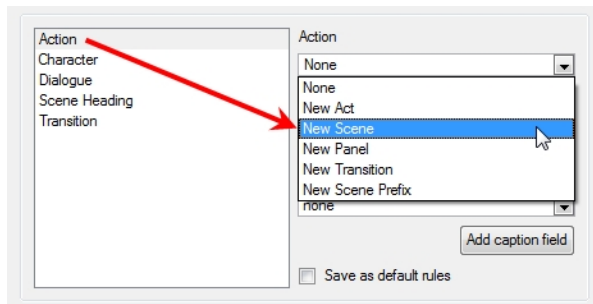
The selected tag, Action, is assigned to New Scene. A new scene will be created every time this tag is encountered in the *.fdx or *.xml script.

4. For the selected tag, decide if you want to set the following options:
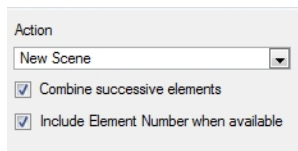
- ‣ **Combine Successive Elements:** Combines the selected tag with an identical tag if it occurs successively in the script. For example, you might choose to create a New Panel for every Dialogue tag that appears in the Final Draft script. However, if there are three Dialogue tags in a row without a break due to an Action tag, then selecting this option places these three lines of dialogue together in the same Panel.
- ‣ **Include Element Number When Available:** In a Final Draft script, there are numbers along the right and left margins of the document that indicate a change in scene. Select this option to import these into your Storyboard Pro project.
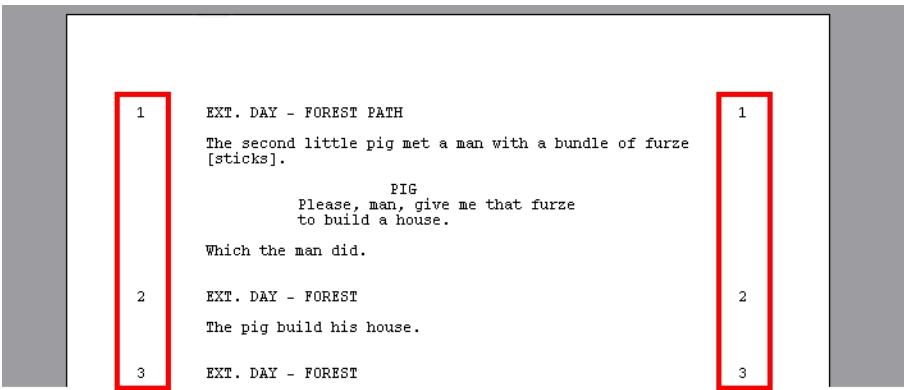
5. From the Destination caption field menu, select the location in the Panel window in which you want place the text associated with the selected tag.
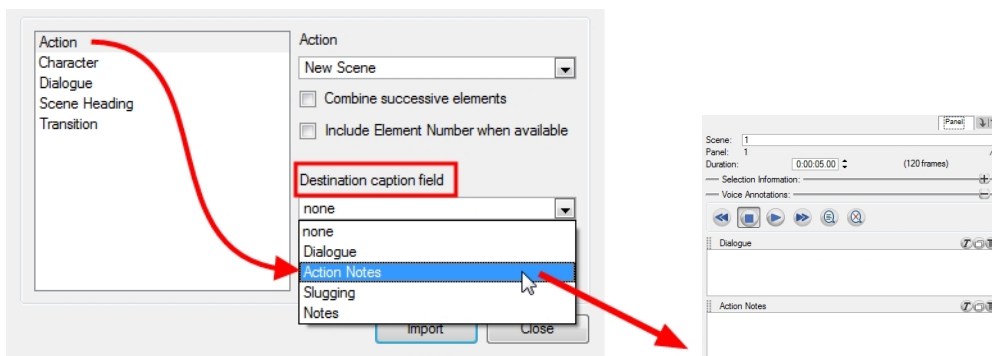
In the example above, Storyboard Pro will take all the text associated with the Action tag in the Final Draft file and put it in the Action Notes section in the Panel window for each new scene that it creates in this project.

6. When you have finished setting up your import parameters, click **Import**.

7. Now, you will be asked to create your new project. You will be prompted to save changes to your current scene, before it is closed and your new project, generated from your script, is opened.

For more information on creating a new Storyboard Pro project, see *Using the Welcome Screen* on page 31.

Creating a New Project from a Final Draft 7 Script

If you are working with version 7 of Final Draft, you must use Final Draft Tagger to generate the ***.xml** file needed to use this feature. After you have produced your export, follow the steps in *Creating a New Project from a Final Draft Script* on page 34 and proceed with the import.

> **NOTE:** Final Draft 8 uses a new file format, ***.fdx**, which can be imported directly into the software, as opposed to the older ***.fdr**, which needs to be exported from Final Draft Tagger to generate an ***.xml** file.

To export your script as an XML:

1. Start Final Draft Tagger.

2. Select **File > Import Script** or press [Ctrl]+[I].

   The Import dialog box opens.

3. In the browser, select your script file and click **Open**.

   Your script appears in Final Draft Tagger.
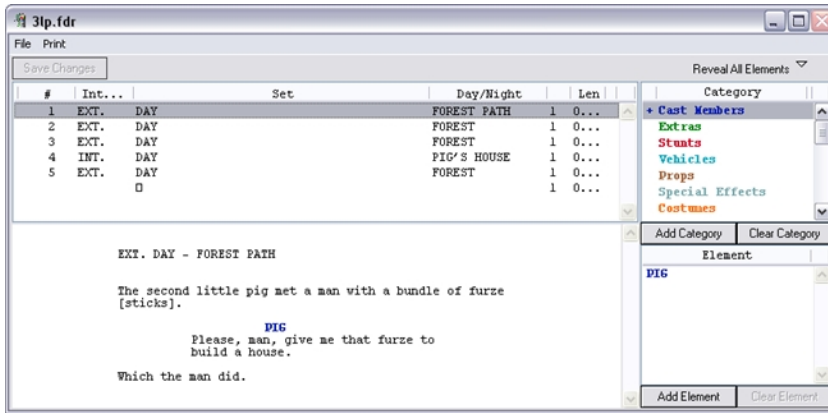
4. Select **File > Export to XML**.

5. Close Final Draft Tagger and proceed to import the ***.xml** file as in the previous section.

Final Draft Import Settings
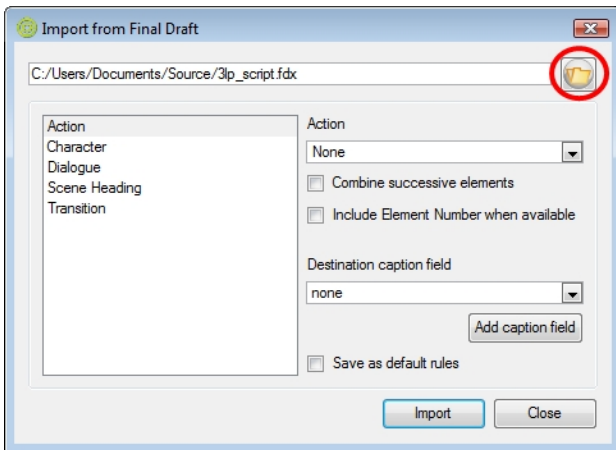
From the Import from Final Draft dialog box, below is a list of some sample settings for the most common tags:

	Action	Combine successive elements	Destination caption field
Action	New Panel		Action Notes
Character	None		Dialogue
Dialogue	None	Enabled	Dialogue

Scene Heading	New Shot	Enabled	Slugging
Transition	New Transition		Notes
Parenthetical	None		None

Try different settings with your style of script and see what works best for you. Remember to select the **Save as default rules** option once you have your settings just right, so these settings are used as the default the next time you create your Storyboard Pro project from a Final Draft script.

Creating a Project from Harmony Scenes

You can create a project from Harmony scenes. But before you do this, you must mark the frames you want to open in Storyboard Pro. Frames must be marked in an annotation column called "EM". For each marked frame, a panel is created in Storyboard Pro.

Storyboard Pro will look one folder deep for the .digital or .xstage file. The name of the folder containing the scene file is used to name the scene in Storyboard Pro. There should only be one scene file in each folder. If there are more than one, the first one will be used.

NOTE: In Harmony, you can add the EM column using Scene > Add > Export Marker Column.

To create a project from Harmony scenes:

1. From the top menu, select **File > New from Harmony Scenes**.

   The New Project dialog box opens.

2. In the Project Directory field, specify the location of your new project.

3. In the Project Name field, type the name of the project. This name will be used as the file name.

4. In the Project Title field, type the name of the project title. It can be a good idea to use the Project Name for the Project Title.

   You can also type in the name of the Project Subtitle, but it is not mandatory. These titles will appear on the appropriate pages of PDF renders.

5. In the Resolution section, do one of the following.

   ‣ Choose the project's resolution. By default, the resolution is set to HDTV_Vertical.

Resolution	Width	Height	FPS	Aspect Ratio
PAL	768	576	25	1.33
NTSC	720	540	24	1.33
low	360	270	24	1.33
HDTV_Vertical	1920	1080	24	1.78
HDTV	1920	1080	24	1.78
film-1.66_Vertical	2048	1234	24	1.66
film-1.66	2048	1234	24	1.66
film-1.33	2048	1536	24	1.33

   ‣ Click the Add ✛ button to add a new resolution to the list.

   The New Resolution box opens.

   • **Resolution Name:** Type a name for your new resolution.
   • **Width/Height**: Enter the resolution width or height in pixels. These two parameters are linked; changing one changes the other.
   • **Field of View**: Set the field of view to use the horizontal or vertical resolution, or enter a custom field of view.
   • **Frames per second**: Type the scene's frame rate per second.

   NOTE: You can delete a custom resolution from the Resolution List by selecting it and clicking the Delete button under the Resolution window.

6. Click **Create**.

   The Select Harmony Scenes Directory window opens.

7. Select the folder that contains the Harmony scenes and click **Select Folder**.

   The name of the folder of each scene file is used to name the scene created. Panels are created in the Thumbnails and Timeline views.

Creating a Scene

In live-action productions, scene changes occur when the location of the action changes, such as from the bedroom to the living room, from the living room to outside, from outside to across town. In traditional animation, every time a painted background has to be changed a ``scene" change is required, even if the characters are in the same location. For example, two characters could be talking face-to-face in a forest, however the trees behind each character would be different as the shot cuts from one character to another. Each of these shots would require a new scene. A sequence of these scenes taking place in the same location could be referred to as an *act*.

In Storyboard Pro, panels in the same scene are grouped together by a dark grey bounding box.

To create a new scene:

1. Do one of the following:

   ‣ In the Storyboard toolbar, click the Add Scene button.
   ‣ Select **Storyboard > Create Scene**.

   A new panel is created in the Timeline immediately after the current shot. The new panel is contained in a separate grey box.
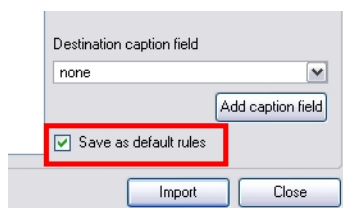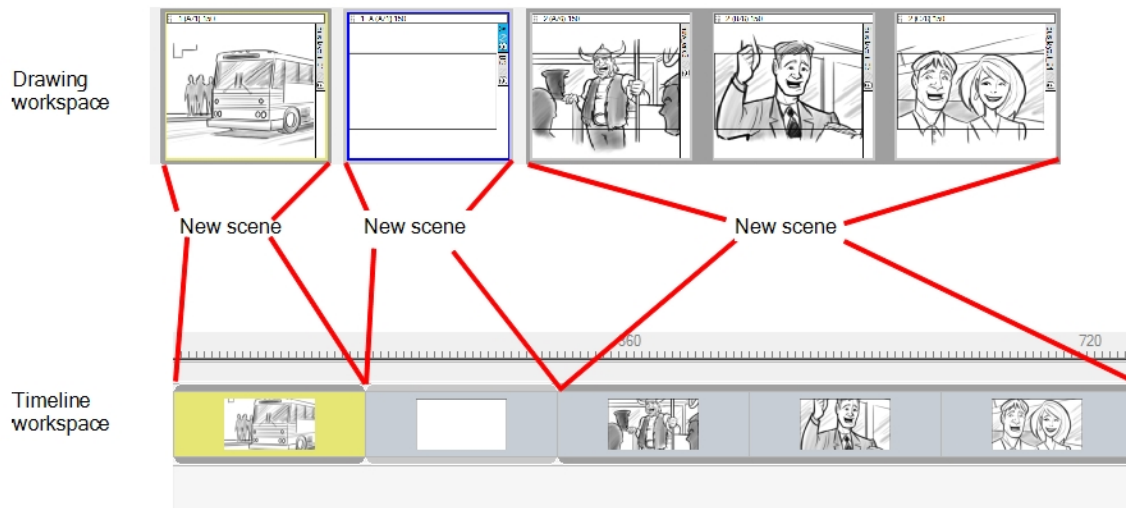
Project Properties

When you created your new project, you chose the name and resolution. However, if you want to change these initial settings later on, you can.

To access project properties:

   ‣ Select **Storyboard > Properties.**

   The Project Properties dialog box opens.
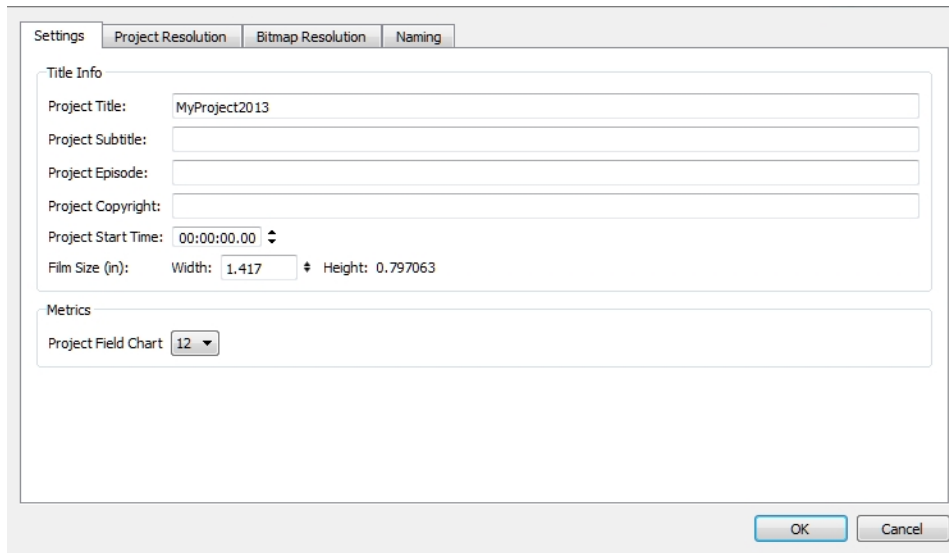
Defining the Project Naming and Start Time

In the Settings tab, you can define the project naming scheme and start time for the current project:
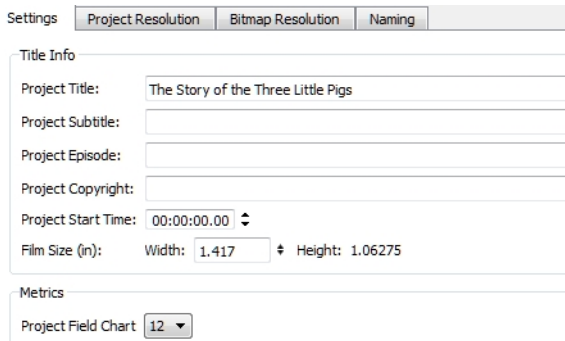
NOTE: Special characters (!"/$) cannot be used for project names because they interfere with the operating system. However, they can be used in the project title.

- **Project Title**: By default, the Project Name already appears is this field if no project title was entered during the creation of this project. The Project Name is the name of the Storyboard Pro project file. The Project Title is the title that will appear in all PDF renders. They can, and often should, be the same.

- **Project Subtitle**: In this field, type the name of the project subtitle, which will appear in the proper places in all PDF renders.

- **Project Episode**: Type the episode number in this field. If you want the word "Episode" to appear next to the number, you must include it in the field as well. The information entered into this field will appear after the Project Subtitle in all PDF renders.

- **Project Copyright**: In this field, enter in the copyright date. This can be the month and year or just the year. This information will appear at the bottom of the page in all PDF renders.

- **Project Start Time:** This time is important when generating an EDL (Editing Decision List) of your project. EDLs are generally used by 3rd party, editing software, such as Final Cut Pro. The EDL determines how the

panels of your project are distributed in the timeline of the 3rd party software. The numerical value you enter in this field also appears as the start time in the Timeline view.

- **Film Size**: When working on a 3D scene, the film size determines the focal length of the camera. You should use the same value as that used in the 3D software used to create your 3D elements. A value of 1.417 is equivalent to 35mm film.

- **Project Field Chart**: Sets the field standard for your project.

The following sample .pdf export indicates the project title, subtitle, episode, and copyright:
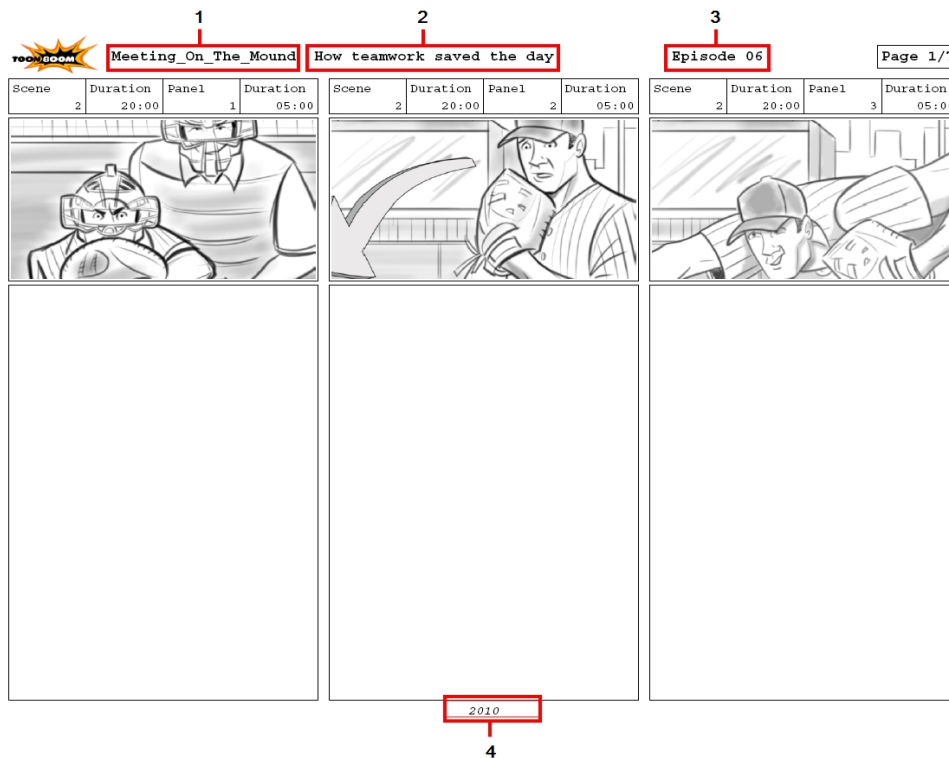
1. Project Title

2. Project Subtitle

3. Project Episode

4. Project Copyright

5. Project Start Time (not shown)

Changing the Project Resolution Settings

In the Project Resolution tab, you can define the project resolution, aspect ratio, field of view and frame rate for the current project:
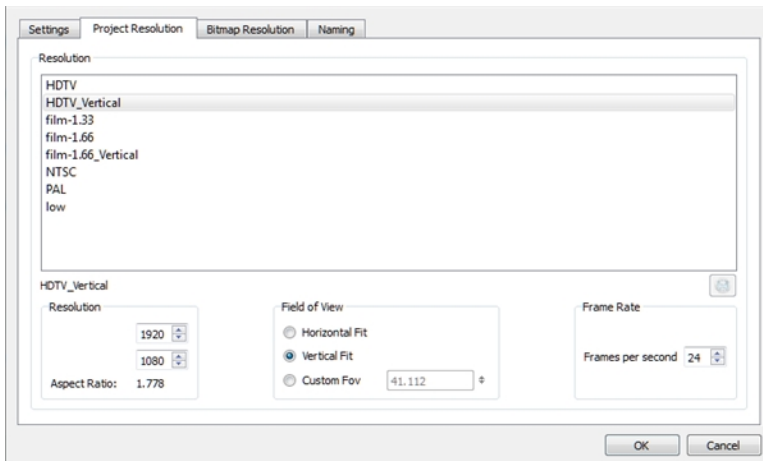
1. **Project Resolution Type:** You can select your project's resolution type from this area. Take into consideration the intended format of the production for which you are creating the storyboard. Your project's resolution should match.

   ‣ **HDTV:** High Definition Television delivers a higher quality image than standard television because it has twice the standard number of scanning lines per frame. To take advantage of the superior quality, your output device must be compatible with HDTV technology to make this resolution setting useful.

   ‣ **HDTV_Vertical:** The "vertical resolution" of HDTV_Vertical refers to how the drawing grid is fit into the camera frame. When working with 12 or 16 field drawing grids, the grid is a different aspect ratio from the camera frame. When you fit vertically, you fit the grid with the top and bottom of the camera frame.

NOTE: The HDTV_Vertical format is ideal when importing images into an HD project.

   ‣ **film-1.33:** Applies to a wide screen film format that conforms to the standard 4:3 pixel aspect ratio.

   ‣ **film-1.66:** Applies to a wide screen film format that conforms to the 16:9 pixel aspect ratio in which the pixel's width is greater than its height.

   ‣ **film-1.66_Vertical:** This is essentially the same as film-1.66. Refers to how the drawing grid is fit into the camera frame. When working with 12 or 16 field drawing grids, the grid is a different aspect ratio from the camera frame. When you fit vertically, you fit the grid with the top and bottom of the camera frame.

NOTE: The film-1.66_Vertical view is ideal for importing images into film projects.

   ‣ **NTSC**: The standard analog television broadcasting system that was used in most of the Americas, Japan, South Korea, Taiwan, Burma, and some Pacific island nations and territories. It conformed to the North American standards on how rectangular pixels were displayed for computer and television screens. This format has been replaced in most regions with HDTV.

   ‣ **PAL:** An analog television encoding system that was used in broadcast television systems in large parts of the world, such as Western Europe, Asia, Australia, most of Africa and some North American countries. This resolution worked best with the European format for television and computer screens, as the rectangular pixels are displayed at a different orientation. This format has been replaced in most regions with HDTV.

▸ **Low:** This format is ideal for videos destined for the web, where size and fast download of a video file might take precedence over quality.

2. **Resolution:** Displays the scene resolution setting selection.

3. **Aspect Ratio:** The aspect ratio describes the number of pixels wide the project is divided by the height. Storyboard Pro always works with square pixels. An aspect ratio of 1:1 indicates that the camera frame is square, and has the same number of pixels defining the width as it does defining the height. The aspect ratio is defined automatically when you enter values for the width and height of the camera frame.

4. **Field of View:** Defines how the camera frame fits with the drawing grid in your scene. A Horizontal fit will fit the drawing grid to the width of the camera frame. A Vertical fit will fit the drawing grid with the top and bottom of the camera frame. When working in 3D, a different custom FOV might be more common, so this can be set here as the default FOV for the scenes in your project. The FOV can be adjusted for individual 3D scenes, in order to switch out the camera lens.

5. **Pixel Dimensions:** Displays the pixel dimensions for your resolution selection. If you decide to type in the pixel dimensions, or use the up and down arrows to change the pixel increments, you must save your custom selection to make it active. It will then appear in the resolution selection list.

6. **Project Frame Rate:** Select the frame rate for your project. The higher the frame rate, for example 30 fps, the smoother your animation will look, but the heavier it will be. The lower the frame rate, for example 12 fps, the choppier your animation may look, but the lighter it will be.

7. **Save Custom Resolution:** Click **Save** to save and create your custom resolution as a setting. This button becomes active when you create a custom resolution type.

NOTE: When changing the FOV value of a project, a dialog box will appear asking if you wish to adjust the cameras to preserve the framing in your project.

Setting the Bitmap Resolution
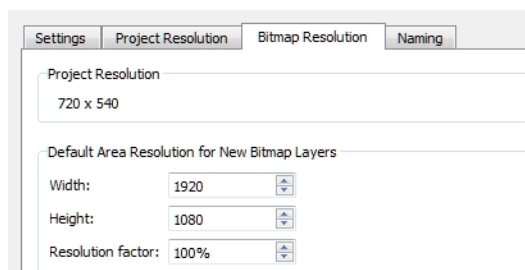
In the Bitmap Resolution tab, you can define the default resolution at which bitmap layers are created. The resolution is based on the number of pixels that fit in the camera frame when the camera is at the default position.

To define the bitmap resolution:

▸ Set the Width/Height or the Resolution Factor.

> **NOTE:** The dimensions of a bitmap drawing layer can be adjusted individually. If you have a camera zoom, for example, then you may want that drawing to be at a higher resolution, so you do not see pixellation when you zoom in. You can adjust this by right-clicking on the layer, and selecting **Change Bitmap Layer Resolution**.

Defining the Naming Rules

All options in the Naming tab affect the Panel window. The changes you make in this window override your Storyboard Pro preferences and affect the current project only. Your default preferences remain in effect for any new projects you create. There are naming rules for scenes and sequences.
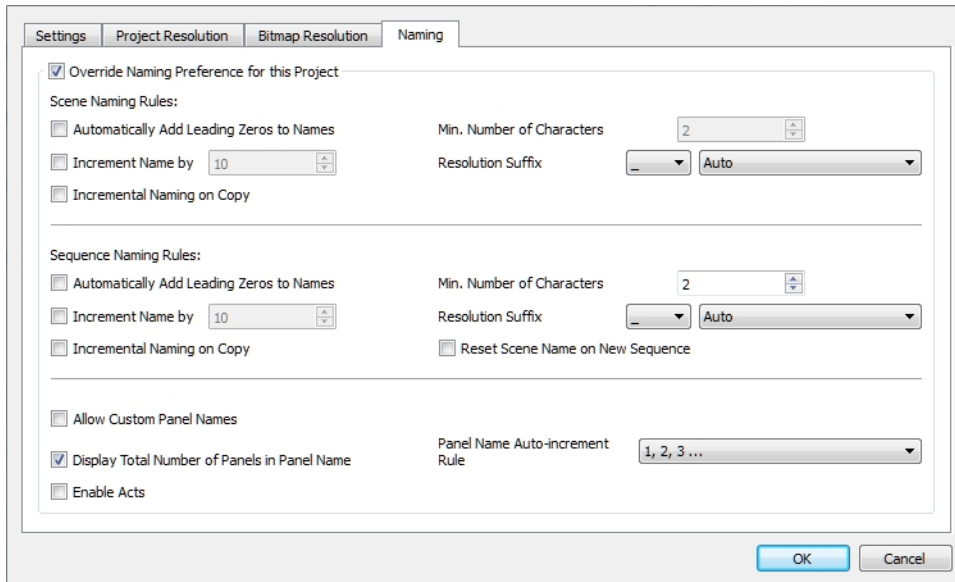
- **Override Naming Preference for this Project**: When selected, current preferences for this project are overridden, and all the options on this tab become active.

- **Automatically Add Leading Zeros to Names**: Automatically adds a zero before the scene or sequence name.

- **Min. Number of Characters**: Determines the minimum number of characters the scene names will contain when using leading zeros.

- **Reset Scene Name on New Sequence**: By default, this option is enabled. Whenever you create a new sequence, the scene naming scheme is reset. For example, the naming will be as follows: Seq 1, Scene 1, Seq 1, Scene 2, Seq 2, Scene 1. When disabled, the scene number always increments. For example, Seq 1, Scene 1, Seq 1, Scene 2, Seq 2, Scene 3.

- **Allow Custom Panel Names**: Selecting this option will activate the Panel field so that you can enter in a custom name for all panels.

- **Display Total Number of Panels in Panel Name**: Selecting this option will display a counter at the end of the Panel field which will indicate the total number of panels in the selected panel's scene.

- **Enable Acts**: Displays the Act field, along with the Act number.

- **Panel Name Auto-increment Rule**: By default, panel names are named numerically. Using this preference, you can select from three other alphabetical increment rules. The difference between each of them is the behaviour once you reach panel Z.

Project Optimization

If file size and speed of use are concerns, there are a few things you can do to optimize your project.

This section includes the following topics:

Optimizing Your Project

To optimize your current project:

1. Select **File > Optimize Project**.

    The Optimize project dialog box opens.
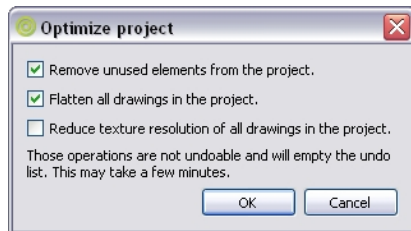
2. Select one or more of the following options:

    ▸ **Remove unused elements from the project:** As you create a storyboard you will delete panels or layers, update drawings, unlink sounds, and so on. Some of these files are kept for backup purposes, but they take up space and increase the size of your project on your hard drive. This option removes these unwanted elements.

    ▸ **Flatten drawings in the project:** Flattens all the brush or pencil line strokes of all the vector drawings in your project. This means that all overlapping strokes will no longer be editable as single strokes, but only as whole, drawn objects.

NOTE: Strokes drawn with different colours will not be flattened together.

    ▸ **Reduce texture resolution of all drawings in the project**: Reduces the texture resolution and consequently makes the project file size smaller. The resolution is set so it cannot go below 72 dpi.

IMPORTANT: Warning: This cannot be reversed once you have reduced the resolution. These operations cannot be undone, and will empty the undo list.

Creating Optimized Drawings

When using any of the playback options in Storyboard Pro, the software has to calculate the positioning of all the ***.tvgs** (Toon Boom vector graphics), the file format that is created from all your drawing strokes. This calculation

tends to slow down the rate of playback. There is, however, a way to circumvent this problem.

There is a a second file format, the ***.tvgo** (Toon Boom vector graphic optimized) that has all the pixel position information precalculated. Using these drawings should significantly speed up playback.

To optimize playback:

1. Select **Edit > Preferences**.

    The Preferences dialog box opens.
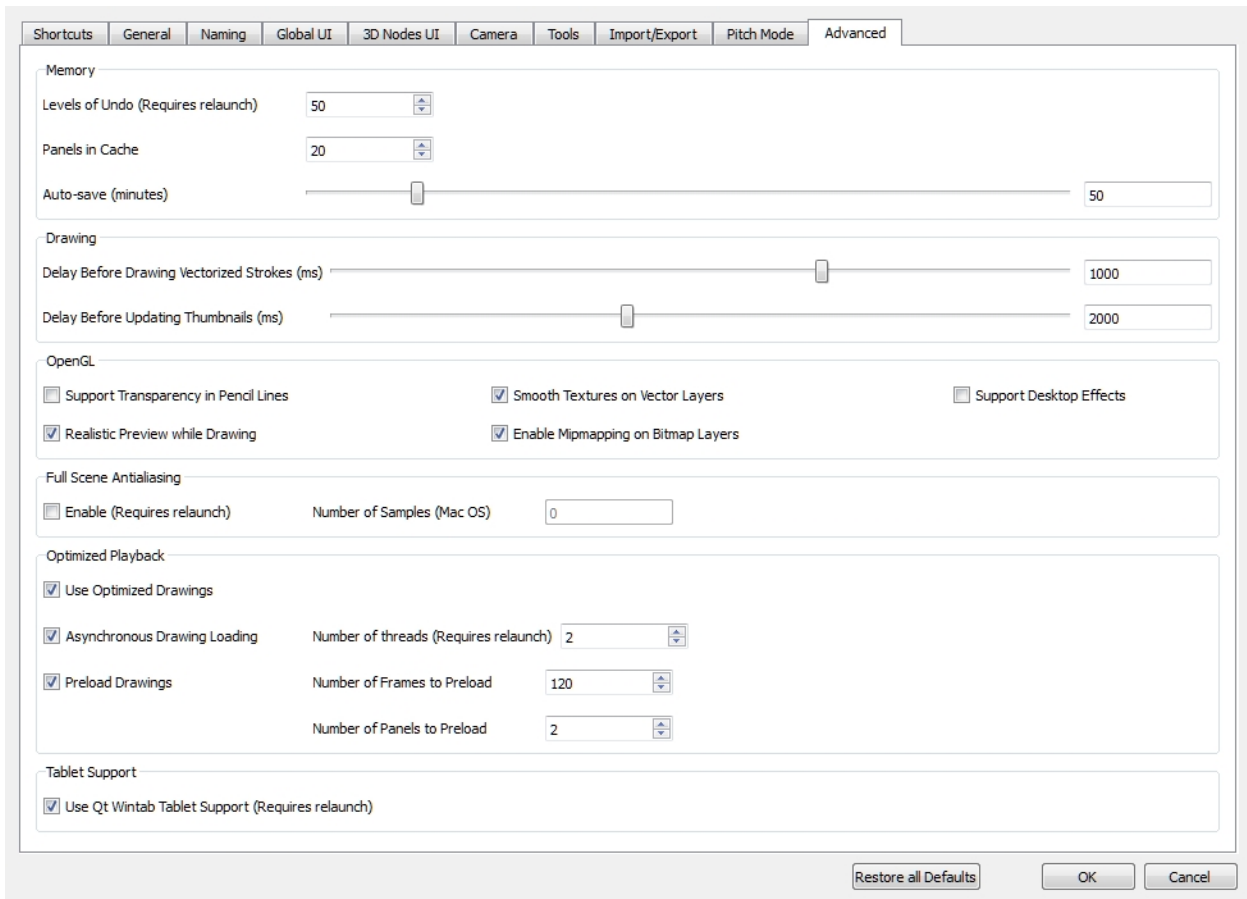
2. From the Advanced tab, under the Optimized Playback section, select the **Use Optimized Drawings** option.

3. Select the **Asynchronous Drawing Loading** option to optimize playback. There are cases in which, during playback, the software might encounter a particularly texture-heavy or complex panel. When this happens, and Asynchronous is deselected, there will be a pause in playback while the frame loads. If you select this option, then playback will continue and the drawings will load as soon as they are available. You may notice a short blink while the drawing loads. To reduce the possibility of seeing a blink, select the Preload Drawings option.

4. Select the **Preload Drawings** option to enhance the playback further, by loading drawings in memory before you reach them during playback. The software will determine which, between the two options, has more drawings to preload, and it will choose the appropriate option on the fly during playback.

    ‣   **Number of Frames to Preload**: The software looks ahead for the number of frames, and checks to see how many drawings are used. Each layer on each panel is a drawing. If you have many short panels, then you will have more drawings than if you had one long panel.

▸ **Number of Panels to Preload**: The software looks ahead for the specified number of panels to determine the number of drawings in those panels. Keep in mind that each layer on each panel is a drawing. If you have long panels, then it will want to look ahead several panels, instead of the specified number of frames.

5. Click OK.

6. Select **File > Create Optimized Drawings**.

Other Optimization Suggestions

-
-
-

Texture versus Plain Vector Brush

When you draw on a layer, all the strokes that you create with the Brush tool are vector elements. There are two kinds of brushes:

- **Plain Brushes:** By default, the brush tool creates vector strokes filled with either a colour or a gradient. Vector strokes use a very small amount of memory and can be used rapidly because they do nt contain any pixel information, only mathematical functions.

- **Texture Brushes:** This type of brush also produces a vector contour for its strokes, but is filled with a bitmap texture. These textures allows you to produce drawings that have natural looking brush strokes that resemble lines drawn using a crayon or airbrush.

Because you are using a bitmap image mapped inside vector strokes, texture brushes use much more memory and processing time than brush strokes filled with colour. Therefore it you wish to make your file size lighter and your drawing speed faster, use only regular brushes to draw your scenes. If you do choose to use texture brushes, is it important to use a reasonable size bitmap for your texture brush.

> **NOTE:** When you use a bitmap layer instead of a vector layer, individual vector strokes are not created. Instead, individual pixels are laid down, recording information about the RGBA of each pixel. Because of this, when working with lots of shading, and lots of different textures or colours, the bitmap layer is actually more efficient than the texture brush on the vector layer–see *Drawing* on page 175.

Flattening Your Drawings

In Storyboard Pro, strokes inside a vector layer are independent. You can select a specific stroke and edit its position, scale, rotation, skew, colour and so on, whenever you want. However, this flexibility increases the amount of memory and resources used, especially when you have a lot of strokes in your drawing (which frequently happens when you sketch).

You can flatten all your drawings in one go. However, you can retain partial flexibility and still minimize file size and resources needed by consciously flattening certain drawings as you draw, or even by selecting them after they have been drawn. You can take all strokes of the same colour with overlapping areas on the same layer and flatten them to create a single drawing with a vector contour.

To flatten strokes as you draw:

1. From the Tools toolbar, select the Brush ✎ tool.

2. In the Tool Properties view, click the Auto-Flatten ⬚ button.

3. In the Stage view, sketch your first drawing.

   The drawing strokes will automatically be flattened.

To flatten an existing drawing:

1. In the Stage view, use the Select tool to select a group of strokes.

   ‣ If you do not select a group of strokes, the whole layer will be flattened.

   ‣ You can also select multiple layers, so they are flattened individually.

2. Select **Tools > Flatten** or press [Alt]+[Shift]+[F].

Crop Texture on Flatten

When you use the Flatten option in the Tools menu, Storyboard Pro automatically crops all textures, reducing the drawing size by removing the texture area which is not visible.

Bitmap Integration

Storyboard Pro allows you to create storyboards by importing scanned images or bitmaps drawn in another software. During the import process, images are vectorized and placed in a new scene in a vector bounding box as a bitmap fill. The bitmap image's resolution can affect your project's file size and the speed at which the software functions while handling your project. When importing bitmaps into a storyboard, there is rarely a need to use a high resolution. This will not increase the quality of your PDF or animatic. You should import bitmaps with a resolution close to the project resolution. For example, in an NTSC project, using a bitmap with a 720x480 resolution or a 72dpi quality will be fine.

Regenerating Thumbnails

You can get the most up-to-date thumbnails in the Thumbnails view. As you draw, a series of small images (thumbnails) is generated. These thumbnails are automatically refreshed based on the refresh duration you set in the Preferences dialog box (Advanced tab, Delay Before Updating Thumbnails parameter).

You can choose update thumbnails immediately. This flushes all cached thumbnails in the Thumbnails and Timeline views, and forces new thumbnails to be regenerated.

To regenerate all thumbnails:

1. Select **File > Regenerate All Thumbnails**.

2. In the dialog box that opens, click **Yes**.

IMPORTANT: This cannot be undone and will flush all existing thumbnail images in the Library.

All thumbnails are flushed and replaced with the regenerated ones.

Backing Up Projects

As you work on your storyboard project, it is always a good idea to save continuously. At the end of each workday, it is even better to backup your work. The difference between backing-up and saving is that a backup is a compressed version of your project. Backing-up your work provides a safety net against corrupted files and allows you to have several versions of your project at different stages, in case you ever want to go back and work from an earlier point in the production.

This section includes the following topics:

- *Backing Up Storyboard* on page 50

- Restoring and Opening a Backup File

Backing Up Storyboard

To backup the current version of your Storyboard Pro project:

1. Select **File > Backup Storyboard**.

   The Create Storyboard Backup window opens.

2. Browse for a location on your computer to save this backup file. You can also rename it with a date or version number.

3. Click **Save**.

   An ***.sbbkp** file is created and saved in the assigned location.

   Bus_Capella.sbbkp
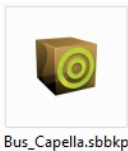
> NOTE: The place where you save your backup file (***.sbbkp**) does not necessarily have to be the same place where you have your current project file saved. For example, you can save the backup on your company's server, even though the current version is saved somewhere on your computer.

Restoring and Opening a Backup File

To restore and open a backup file:

1. Do one the following:

   ▸ From the top menu, select **File > Restore and Open Backup**. In the Open Storyboard Backup window that appears, locate, and select the ***.sbbkp** file.

   ▸ On your computer, go to the location where you saved the ***.sbbkp** file and double-click its icon. In the browser window, select a place to save the restored file.

2. The project opens in Storyboard Pro.

Basic Commands

This table lists the most common commands used in Storyboard Pro:

Command	Action	Access Methods
New	Starts a new scene while closing any open scene. The New Scene dialog box opens, prompting you for the directory, name and resolution information.	**File > New** [Ctrl]+[N] (Windows) [⌘]+[N] (Mac OS X)
Open	Opens the Open Scene file dialog. Browse your file system for a scene file. The Open command is not disabled when a scene is opened. You can open a new scene from the current one and the previous scene will be closed.	**File > Open** [Ctrl]+[O] (Windows) [⌘]+[O] (Mac OS X)
Open Recent	Displays a quick access list to view and open recently used Storyboard Pro files.	**File > Open Recent**
Close	Closes the currently open scene, but does not close Storyboard Pro.	**File > Close** [Ctrl]+[W] (Windows) [⌘]+[W] (Mac OS X)
Save	Saves all changes made to the open scene, drawings, palettes, and palette lists.	**File > Save** [Ctrl]+[S] (Windows) [⌘]+[S] (Mac OS X)
Save As	Saves the current state of a scene as another scene. You are prompted to give a new name and choose a different location to this scene before saving it. This will create a complete scene directory for the new scene.	**File > Save As**
Quit	Closes Storyboard Pro. If the current scene has changes, it asks if you want to save them before closing.	Windows: **File > Quit,** [Ctrl]+[Q] Mac OS X: **Storyboard Pro > Quit Storyboard Pro**, [⌘]+[Q]
Cut	Removes selected objects. You can then paste the object or its properties to another object.	**Edit > Cut** [Ctrl]+[X] (Windows) [⌘]+[X] (Mac OS X)
Copy	Copies the selected objects and properties.	**Edit > Copy** [Ctrl]+[C] (Windows) [⌘]+[C] (Mac OS X)
Paste	Places an object you cut or copied into the location you select in the Camera and Timeline view.	**Edit > Paste** [Ctrl]+[V] (Windows) [⌘]+[V] (Mac OS X)

Delete	Removes selected objects.	**Edit > Delete** [Delete]
Select All	Selects all drawing objects in the current drawing window in the Timeline and Stage view. This helps you manage the objects as one body when moving them.	**Edit > Select All** [Ctrl]+[A] (Windows) [⌘]+[A] (Mac OS X)
Deselect All	Removes the selection from the selected objects in the Drawing and Stage view.	**Edit > Deselect All** [Esc]
Select Panels in Current Act	Select all panels in the current act.	**Edit > Select Panels in Current Act**
Select Panels in Current Scene	Selects all the panels in the currently selected scene.	**Edit > Select Panels in Current Scene**
Undo	Removes the last change made to your animation project. Storyboard Pro supports multiple undo, so you can revert changes you have made in the order you made them.	**Edit > Undo** [Ctrl]+[Z] (Windows) [⌘]+[Z] (Mac OS X)
Redo	Undoes an operation that you just did. This command becomes active only after you use the Undo command.	**Edit > Redo** [Ctrl]+[Shift]+[Z] (Windows) [⌘]+[Shift]+[Z] (Mac OS X)
Help	Opens the Storyboard Pro Help System PDF, complete with instructions on how to use the system.	**Help > Help** [F1]
Storyboard Pro on the Web	Opens the Storyboard Pro website, which features a Support and **Community > Forum** section.	**Help > Storyboard Pro on the Web**
Show End User License Agreement	Opens the License dialog box to display the End User License Agreement.	**Help > Show End User License Agreement**
About	Lets you access general information about the software.	Windows: **Help > About** Mac OS X: Storyboard Pro **>** **About**Storyboard Pro

Chapter 3: Discovering the Interface
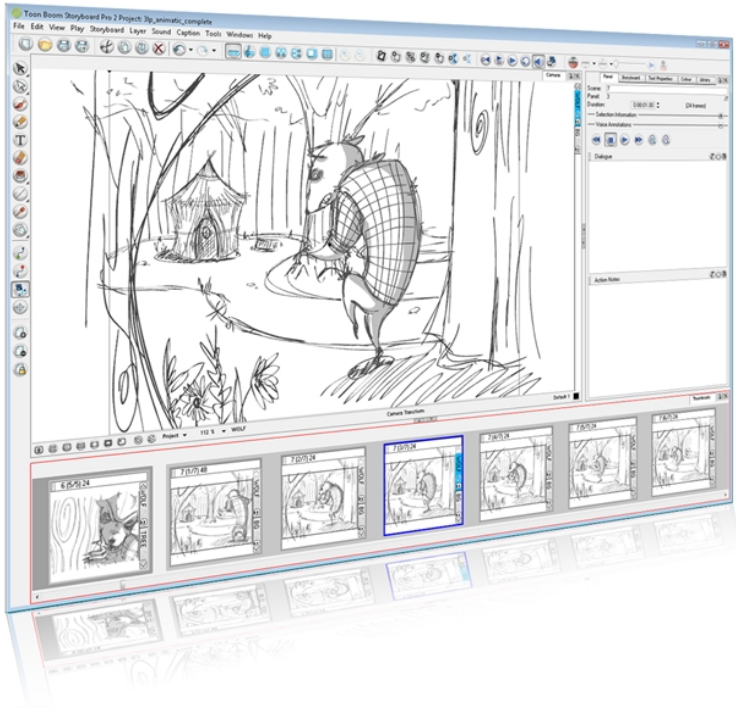
Understanding how to manage the Storyboard Pro interface helps you to work efficiently and organize your workspace conveniently. There are a series of views and toolbars you can use as you perform different operations. Each user has a preferred way of working in the interface. In this chapter, you will learn about the main elements of the interface and how to manage them.

This chapter includes the following topics:

User Interface

This section takes you through the most common elements of the user interface. Throughout this user guide, you will learn about each view and toolbar, and how to use them.

Views and Toolbars

Storyboard Pro has several views and toolbars. The top toolbars are available at the top of the interface and the different toolbars are in individual windows.

This is a complete list of the views and toolbars available in Storyboard Pro.

Views	Toolbar
3D Nodes	Camera
Brush Presets	Edit
Camera view	File
Colour	Layer
Layers	Navigation
Library	Sounds
Message Log	Storyboard
Panel	Tools
Panel PDF Options	View
PDF Export	Workspace
Pitch Mode	Brush Preset
Side view	Keyframes and Control Points
Stage view	Onionskin
Storyboard	Playback
Thumbnails	
Timeline	
Tool Properties	
Top view	

Interface Highlights

It is important that you become familiar with the main elements of the user interface. This will help you to start using Storyboard Pro. You can learn more about the highlights described here, and how to use them in a production context, throughout this guide.

When you start Storyboard Pro for the first time, the default workspace is displayed. It contains all of the main elements.
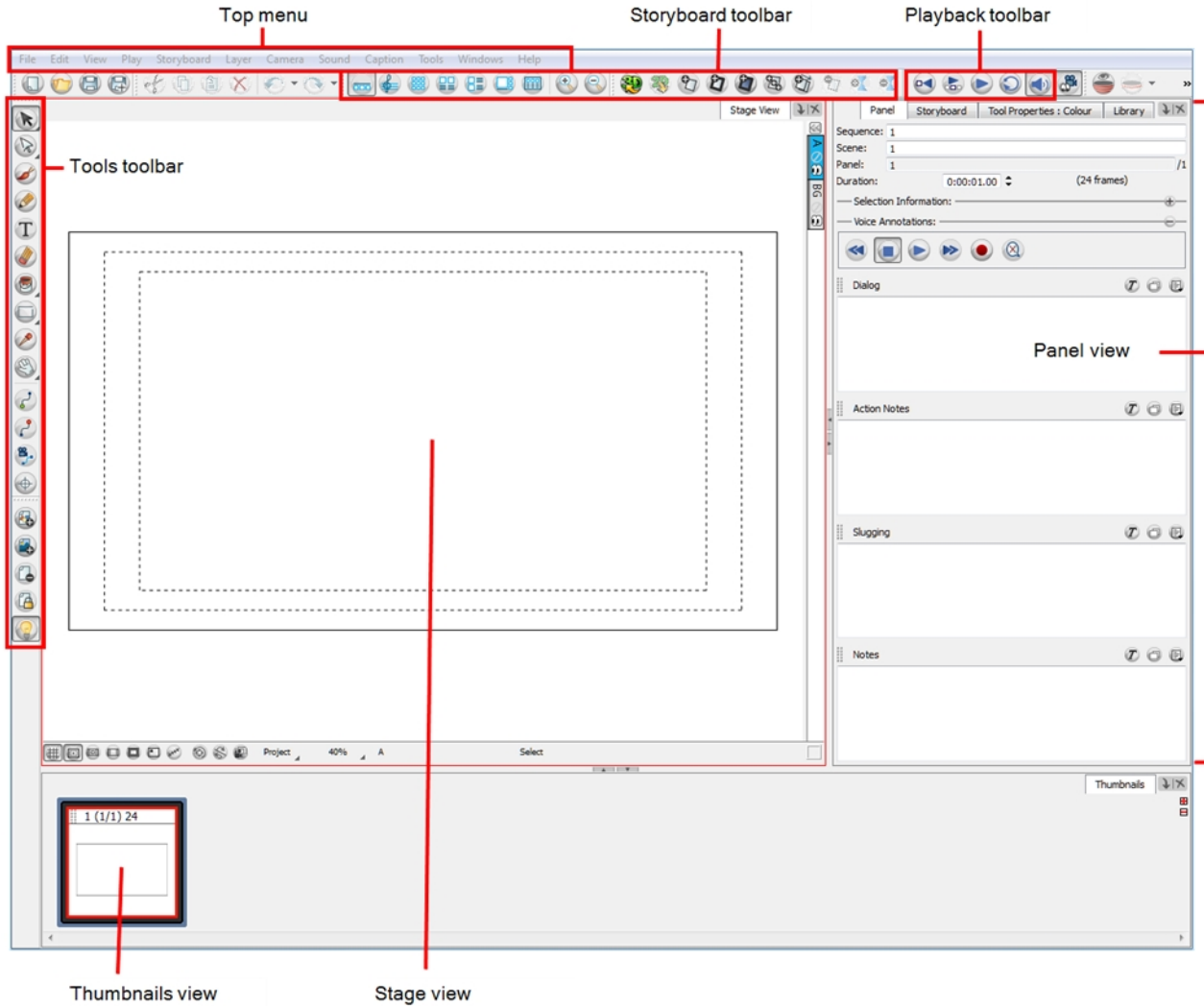
To learn how to modify the workspace and add more views and toolbars, refer to the following sections:

- *Managing the Workspace* on page 77
- *Managing the Views* on page 70

Stage View

1. Grid
2. Safety
3. 4:3 Safety
4. 4:3 Area
5. Camera Mask
6. Camera Label
7. Complete Camera Path
8. Reset View
9. Reset Rotation
10. Look at Selected (3D only)
11. Point of View Drop-down Menu
12. Zoom
13. Layer Name
14. Tool Name
15. Colour View
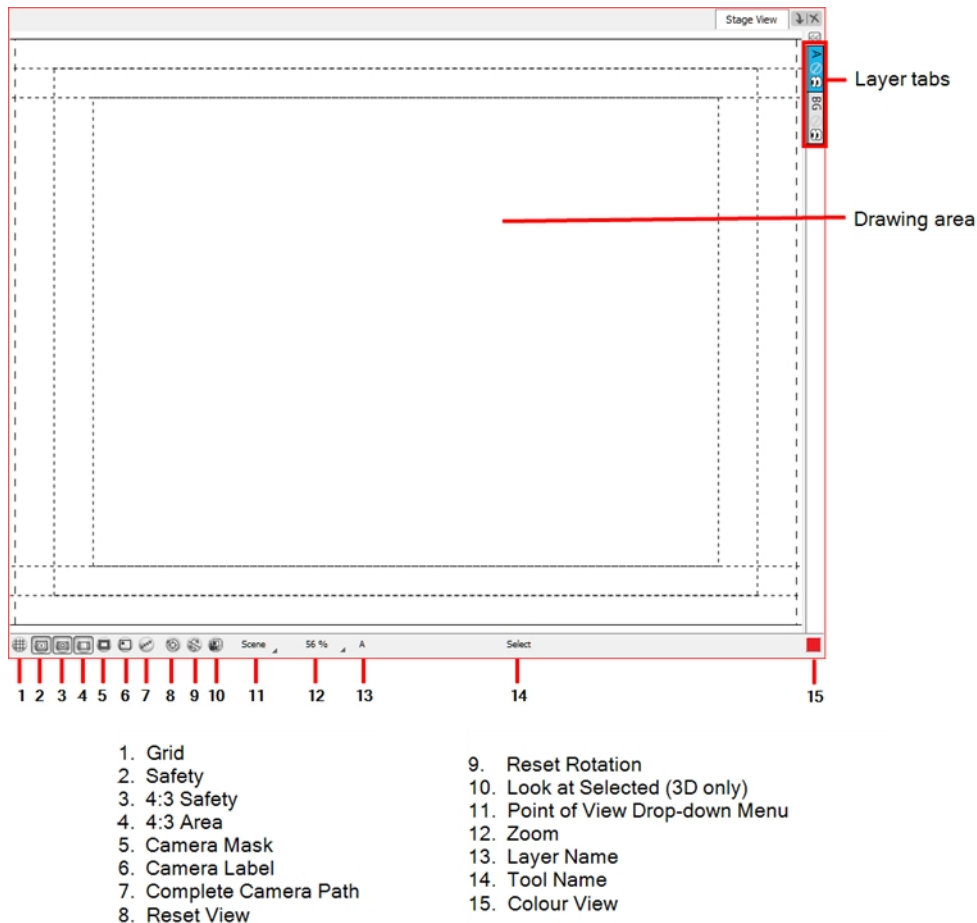
The Stage view is the centre of operations in Storyboard Pro. In this view, you can build, draw, paint, animate the camera, create layer paths, and see your results.

The Stage view has a status bar at the bottom that is displayed by default. You can hide the status bar through the Preferences panel.

To show/hide the status bar:

1. Open the Preferences dialog box by doing one of the following:

   ‣ Select **Edit > Preferences** (Windows) or **Storyboard Pro > Preferences** (Mac OS X).

   ‣ Press [Ctrl] + [U] (Windows) or [⌘] + [,] (Mac OS X).

1. In the Preferences dialog box, select the **Camera** tab.

1. In the Options section, deselect the **Show Status Bar** option.
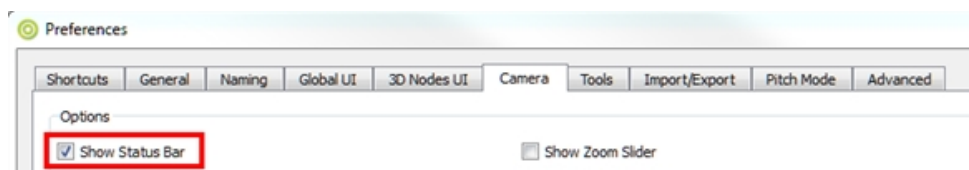
To zoom the Stage view:

‣ In the status bar, click the Zoom menu and select a zoom level.

‣ Roll the scroll wheel of your mouse to zoom in and out of the Stage view.

> **NOTE:** You can also do this in the 3D workspace in the Camera, Top, and Side views.

To reset the Stage view:

Select **Edit > Reset Stage View To** and one of the following:

‣ **Default Drawing Area** to display the entire drawing area.

‣ **Current Panel Overview** to always reset the view to fit the camera, regardless of the point of view mode.

‣ **Camera Overview** to display the current panel from the camera`s point of view.

‣ **Start Camera Frame** to display the panel of the first frame in a panel.

‣ **End Camera Frame** to display the panel of the last frame in a panel.

⊞ Grid

You can choose to display a grid that appears in the Stage view. The default grid is a standard 12 field animation grid, but you can choose another.

You can also access the grid from the top menu by selecting **View > Grid > Show Grid** or press [Ctrl]+[G] (Windows) or [⌘]+[G] (Mac OS X)—see *Drawing* on page 175 to learn more about the grid options.

▣ Safe Area

The Safe Area button shows or hides the TV safety zone and the centre of the camera frame. The Safe Area adapts to the scene resolution, as well as the safety zone and frame's centre.

You can also access this feature from the top menu by selecting **View > Extras > Show Safe Area**.

You can define your own safety limits in the Preferences dialog box—see *User Interface Preferences - Camera Tab* on page 88.

▣ 4:3 Safety

The 4:3 Safety button shows or hides the TV safety zone and the centre of the camera frame for a regular 4:3 resolution. If you are working on a widescreen project, for example, you can easily plan in advance the conversion of your project to a TV format. This way, you can create your project to fit both resolutions.

You can also access this feature from the top menu by selecting **View > Extras > Show 4:3 Safe Area**.

▢ 4:3 Area

The 4:3 Area button shows or hides the 4:3 resolution zone without the centre of the camera frame and TV safety zone.

You can also access this feature from the top menu by selecting **View > Extras > Show 4:3 Area**.

▫ Camera Mask

The Camera Mask button shows or hides a black mask around the scene's frame to avoid seeing anything outside the Camera frame. This is handy when you are setting up the scene as it allows you to see the scene's composition better. You can also access this feature from the top menu by selecting **View > Extras > Camera Mask**.

▫ Camera Label

The Camera Label button shows or hides the IN and OUT indications in the top-left corner of the camera frames, on the start and end position of a camera move for the current panel. When the Camera tool is selected, the labels switch to alphabetical labels that clearly show the different camera keyframes—see *Animatic* on page 331.
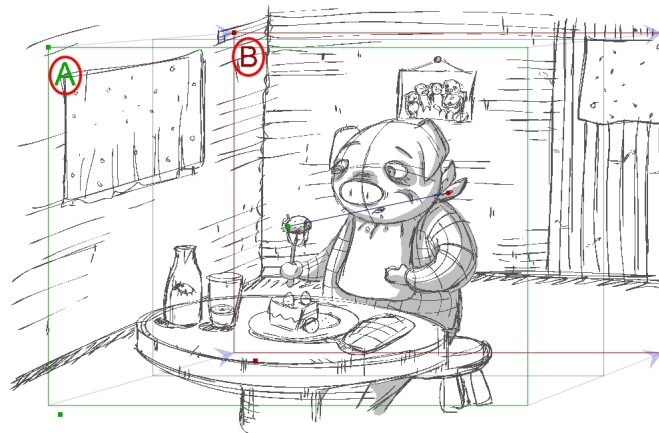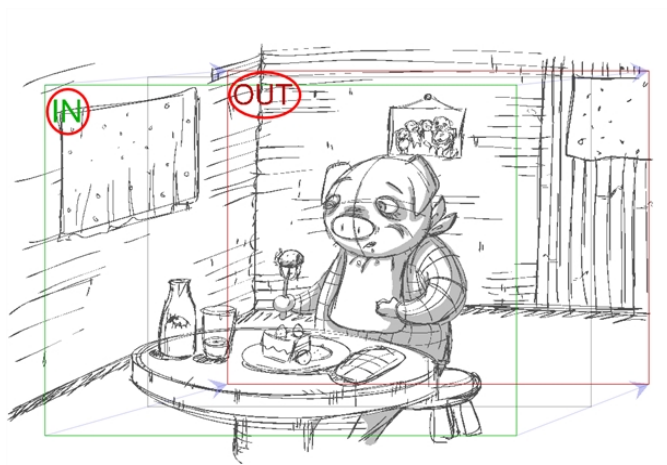
Complete Camera Path

Show Complete Camera Path is off

Show Complete Camera Path is on

The Complete Camera Path button displays all the related camera keyframes and paths in a scene. When this button is deactivated, the Stage View only displays keyframes that are contained in a panel.

You can also access this feature from the top menu by selecting **View > Show Complete Camera Path.**

NOTE: This option is not available in Camera by Panel Compatability mode.

Reset View

The Reset View button resets any panning, zooming or rotation done in the Stage View and returns the display to its initial settings. This option is also available from the top menu. Select **View > Reset View** or press [Shift]+[M].

NOTE: This option works with the *Point of View Menu* on page 60.

Reset Rotation

The Reset Rotation button resets any rotation done in the Stage View and returns the display to its initial rotation settings. This option is also available from the top menu. Select **View > Reset Rotation** or press [Shift]+[X].

⊞ Look at Selected

When rotating 2D layers in 3D space, you can reach a situation where the Stage View is no longer perpendicular to a Drawing layer, making it impossible to draw on it. Use this option to make the Stage View perpendicular to a selected drawing layer, allowing you to draw on it.

> **NOTE:** This option is used when working in 3D space—see *Working in a 3D Space* on page 257.

Point of View Menu

The Point of View menu lets you determine the level at which the current position of the Stage View (zoom, pan and rotation) is remembered when you are flipping through the panels.
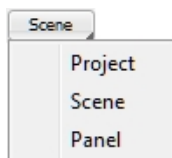
- **Project**: Keeps the zoom, pan and rotation values of the Stage view for the panels of the project.
- **Scene**: Keeps the zoom, pan and rotation values of the Stage view for the panels that are part of the current scene.
- **Panel**: Allows every panel of the project to have its own zoom, pan and rotation value.

These options are also available from the top menu. Select **View > Point of View Mode > Project Level**, **Scene Level** or **Panel Level**.

> **NOTE:** The current Point of View mode will also affect the different Reset View commands' behaviour as they will reset according to the Point of View mode.

Zoom Menu

The Zoom menu lets you enlarge or reduce the Stage view display. If you want the camera frame size to always match the size of your Stage View, select the Fit to View option. Click the corner of the button and select a zoom level.
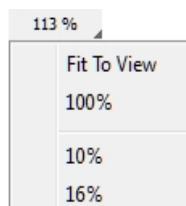
You can also use the default keyboard shortcuts [1] to zoom out and [2] to zoom in.

Layer Name

The Layer Name field displays the name of the selected layer of the current panel.

Tool Name
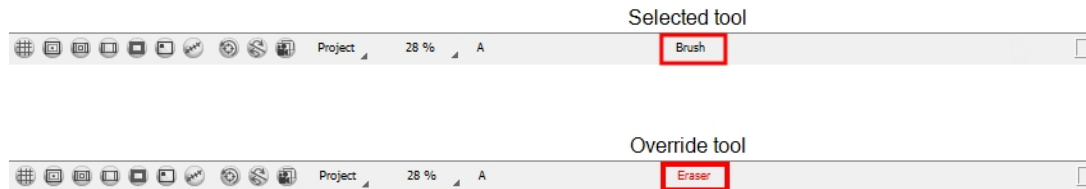
The Tool Name field displays the name of the selected tool. If you override a tool using an overriding keyboard shortcut, the tool's name turns red—see *Drawing* on page 175.

Coordinates

The Coordinates field shows the coordinates of the cursor while in the Stage iew.

Colour Picker

The Colour Picker square at the bottom-right of the Stage View displays currently selected colour in the Colour View . You can click the colour pot to open the Colour View and select a new colour.

Camera Space

This is where you draw, animate layers, and create camera moves, as well as preview your storyboard. It is the main space of the default Drawing workspace.

Refer to the following chapters to learn more about the camera space:

- *Drawing* on page 175
- *Adding Colour* on page 289
- *Animatic* on page 331

Thumbnails View
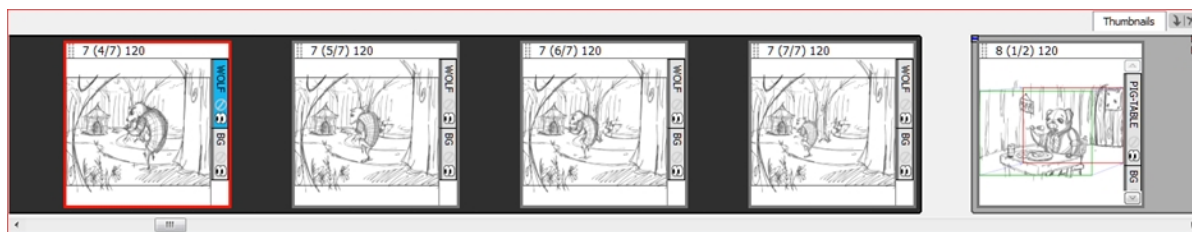
In the default workspace, the Thumbnails view is at the bottom of the interface. The Thumbnails View displays all the panels of your project in chronological order. You can use this view to navigate through your storyboard, rearrange panels and scenes, and select the panel of your choice to be displayed in the Stage view.

By default, it is not possible to draw in the Thumbnails view. However, you can change this behaviour in the Preferences dialog box.

- *Expanding or Collapsing Scenes* on page 63
- *Working in the Timeline with a Collapsed Scene* on page 63

To enable drawing in the Thumbnails view:

1. Do one of the following:

   ‣ Select **Edit File > Preferences** (Windows) or **Storyboard Pro > Preferences** (Mac OS X).

   ‣ Press [Ctrl] + [U] (Windows) or [⌘] + [,] (Mac OS X).

1. In the Preferences dialog box, select the **General** tab.

1. In the General section, deselect the **Forbid drawing on panel thumbnails** option.
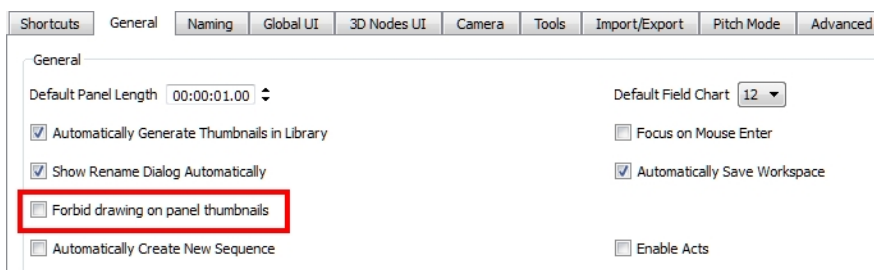
By default, the Thumbnails view does not have browsing buttons. But you can change this setting in the Preferences dialog box.

To display the next and previous thumbnails:

1. In the Preferences dialog box, select the **Global UI** tab.

1. In the Thumbnails View section, select the **Display Next and Previous Buttons** option.

   Two buttons appear on the Thumbnails view to let you display the next and previous thumbnails.
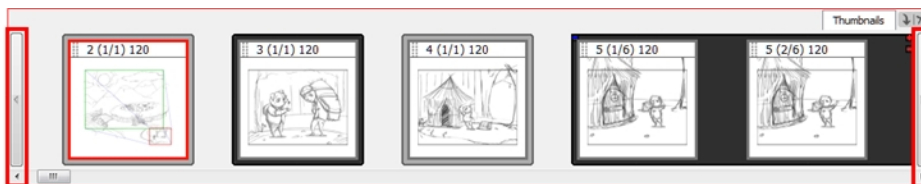
To keep the current panel centred:

1. In the Preferences dialog box, select the **Global UI** tab.

1. In the Thumbnails View section, select the **Keep Current Panel Centred** option.

For more information about drawing your storyboard panels—see *Drawing* on page 175.

Expanding or Collapsing Scenes

As you work on a storyboard, you may accumulate a large number of scenes composed of a tremendous number of panels. You can collapse lengthy scenes into one panel to have more space in the Thumbnails view.
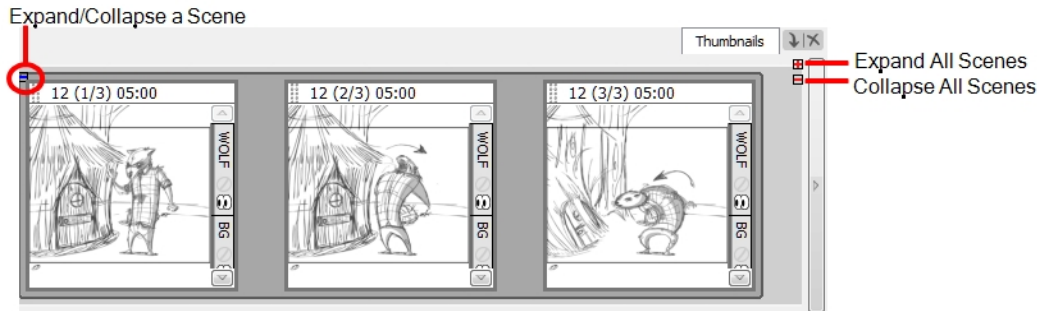
To expand or collapse a scene:

‣ In the Thumbnails view, click the Expand/Collapse Scene button at the top-left of a scene composed of many panels.

One of the following happens:

The scene collapses, leaving only the first panel visible. The Expand/Collapse icon changes to a plus (+) sign.

The scene expands to show all its panels. The Expand/Collapse icon change to a minus (-) sign.

To collapse or expand all scenes:

‣ In the Thumbnails view, click the Expand/Collapse All Scenes button at the top-right.

Working in the Timeline with a Collapsed Scene

When your scene is collapsed, you can still work in the Timeline. However when you select a panel, the entire scene is selected, not just one panel. This means that you cannot work only on a single panel in the Timeline; you must expand the collapsed scene first.

> **IMPORTANT:** If you try to delete a panel in a collapsed scene, the entire scene will be deleted. You cannot delete a single panel.

Tools Toolbar

The Tools toolbar contains all the main tools you will use while working in Storyboard Pro. In the default workspace, this toolbar is displayed vertically on the left side of the interface.

Each tool is explained in detail in the following chapters:

- *Drawing* on page 175
- *Adding Colour* on page 289
- *Animatic* on page 331
- *Layers* on page 151

Storyboard Toolbar

The Storyboard toolbar contains all of the basic commands related to adding and deleting panels, scenes, and transitions, as well as switching between the 2D and 3D workspaces.

Each command is explained in detail in the following chapters:

- *Getting Started* on page 29
- *Script and Panels* on page 95
- *Working in a 3D Space* on page 257
- *Animatic* on page 331

Playback Toolbar

The Playback toolbar lets you play back your storyboard. When you create an animatic with transitions and sound, you can play it back in real time in the Stage view to check the timing.

Button	Name	Description
◄	Go to First Frame of Selection	Automatically places the playback marker at the beginning of the panel selection. This selection can be one or many panels. In the Timeline view, you can see the red marker positioning itself at the first frame of the first panel of the selection.
	Play Selection	Plays back a selection of panels. Select **Play > Play Selection**. Keyboard shortcut: [Shift]+[Enter]
►	Play	Starts and stops playback of the storyboard. Select **Play > Play.**
↺	Loop	Repeats playback. Select **Play > Loop.**
◀))	Sound	Enables sound in the playback. Select **Play > Audio Playback.**
	Camera Preview	Enables dynamic camera movements during playback. Select **Play > Camera Preview.**

NOTE: When animating storyboards in the 3D space, with 3D or 2D layers, the Stage view only displays an approximation of that panel and may not be completely accurate. Use the Camera View to accurately see what the camera captures in the panel–see *Previewing the Panel with the Camera View* on page 372.

Play Menu Commands

In addition to the Playback toolbar, there are more playback commands available in the Play menu:

- **First Panel:** Selects the first storyboard panel and places the playback marker at the beginning of this panel.

- **Previous Scene:** Selects the scene preceding the current one and places the playback marker at the beginning of that scene.

- **Previous Panel**: Selects the panel preceding the current one and places the playback marker at the beginning of this panel. Default keyboard shortcut: [A].

- **First Frame**: Places playback marker at the first frame and selects the first panel of the storyboard. Default keyboard shortcut: [Home].

- **Previous Frame**: Use this to go to the previous frame of the storyboard. Default keyboard shortcut: [,].

- **Next Frame**: Use this to go to the next frame of the storyboard. Default keyboard shortcut: [.].

- **Last Frame**: Use this to place the playback marker at the last frame and select the last panel of the storyboard. Default keyboard shortcut: [End].

- **Next Panel**: Use this to select the panel next to the current one and place the playback marker at the beginning of that panel. Default keyboard shortcut: [F].

- **Next Scene**: Use this to select the scene next to the current one and place the playback marker at the beginning of that scene.

- **Last Panel**: Use this to select the last panel of the storyboard and place the playback marker at the last frame.

- **Go to Scene**: Use this to specify to a scene to go to in the storyboard.

- **Go to Frame**: Use this to go to a specific frame of the storyboard.

Refer to the *Animatic* on page 331 chapter to learn more about frames and timing.

Panel View

The Panel view displays the different captions which are related to the current panel, as well as other useful information.
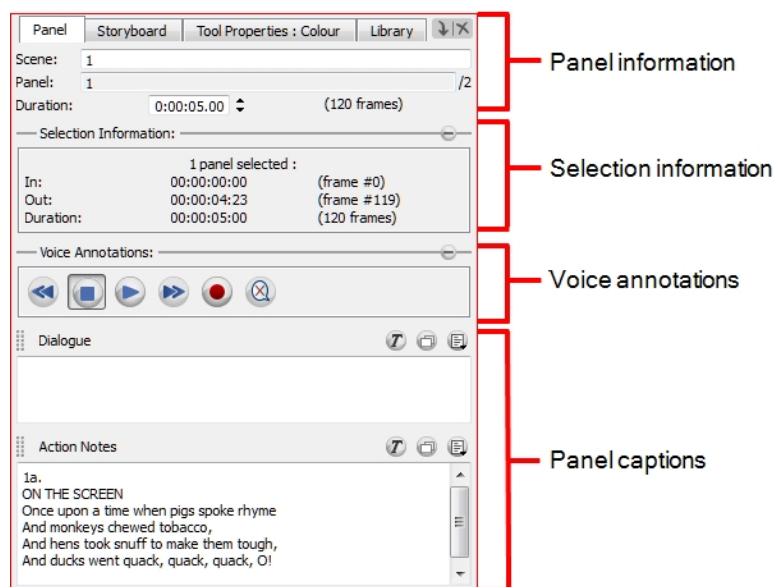
Panel Information

This section of the Panel view is where information, such as the duration of the current panel, name of the current panel and name of the scene in which it is part of is displayed. It is possible to edit some of the fields—see *Script and Panels* on page 95.

Selection Information

This collapsible section of the Panel view is where the information, such as the number of selected panels, the in and out of the current selection, as well as the duration of the selected panels. These fields are for reference only; they cannot be edited.

Click the Collapse ― button to hide the section and leave more room for the Script caption field. Once it is collapsed, you can click the Expand ＋ button to display the entire section again.

Voice Annotations

It is possible to add voice annotations to a panel. This collapsible section is used to control and edit these annotations—see *Voice Annotations* on page 430.

Panel Captions

There are several fields which are collectively known as *panel captions*. Captions are a method by which you can organize information in your project, and tie that information to a panel. They are fully customizable. These are the default names:

- **Dialogue**: Type or copy/paste dialogue from your script that occurs during this shot in the current panel.

- **Action Notes**: Type or copy/paste notes related to the action occurring in the panel.

- **Slugging**: Add notes referring to the timing of the storyboard. Slugging is the timing of the individual recorded lines of dialogue against the board.

- **Notes**: Add anything relevant about the current panel or the shot it represents. For example, the crew working on the shot, required props, ambient sounds, continuity notes or required equipment to complete the shot.

The caption fields are named by default, you can easily change the name of these fields by clicking the Caption Menu ▤ button and selecting the Rename Caption option. Once you have changed the names of the captions and you are certain that you want to keep these names throughout the project, you can set the new names as default by selecting **Caption > Save Captions Layout as Default** from the top menu.

You can use the Caption Menu ▤ button to access the commands related to your caption fields, and the Text Formatting ⊤ button to display a toolbar to format your text.

Refer to the following chapters for more information about using the Panel view: *Script and Panels* on page 95, *Animatic* on page 331, and *Storyboard Supervision* on page 427.

Storyboard View

The Storyboard view is where you import or type your script. It also displays valuable information about your storyboard project. The Storyboard view is divided into two areas: Project information and Script caption.
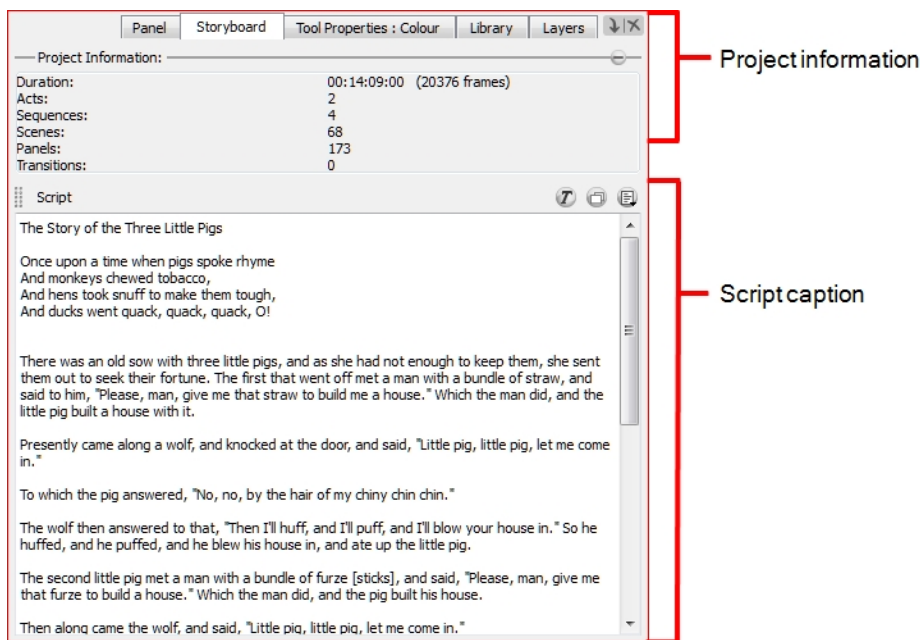
Project Information

This collapsible section of the Storyboard view is where information such as the duration, number of acts, sequences, scenes, panels, and transitions is displayed. You can click the Collapse − button to hide the section and leave more room for the Script caption field. Once it is collapsed, you can click the Expand + button to display the entire section again.

Script Caption

Like panel captions, storyboard captions are fully customizable. The difference is that the information that you store here is relevant for the entire storyboard, rather than for a specific panel. This default caption field is specifically there for your script. You can use the Caption ▤ menu to access the import commands and the Text Formatting ⊤ button to display a toolbar to format your text—see *Script and Panels* on page 95.

Tool Properties View

The Tool Properties view contains the most common options and operations related to the currently selected tool. As soon as you select a tool from the Tools toolbar, the Tool Properties view is updated.

The content of the Tool Properties view is explained in detail in the following chapters:

- *Getting Started* on page 29

- *Drawing* on page 175

- *Adding Colour* on page 289

- *Animatic* on page 331

Colour View

The Colour view is where you create colours; it is also necessary for drawing and painting.
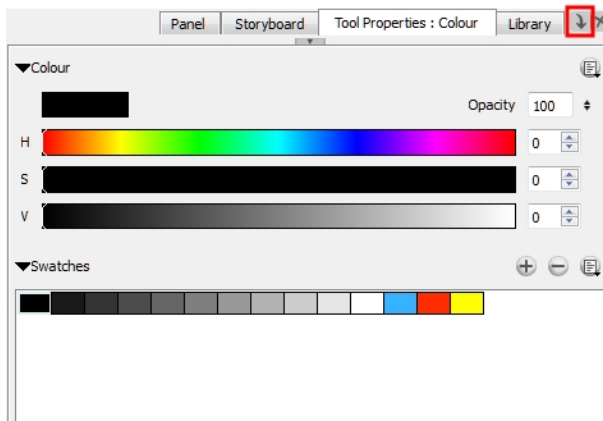
To access the Colour view:

‣ In the Panel view, click the View Menu ➕ button and select **Colour**.

➕ Add Colour

The Add Colour button lets you creat a new colour swatch from the current colour. Click the Add Colour button to add a new swatch to the bottom of your colour list or swatches.

➖ Delete Colour

The Delete Colour button lets you delete a selected colour swatch from the Colour view.

Colour View Menu

The Colour View menu lets you access commands related to the Colour view, such as creating and deleting colour swatches, changing the display mode, import and export colours, and create new textures.

For more information on colour, see *Adding Colour* on page 289.

Menus

In Storyboard Pro, you can access the commands from the following three menus:

- *Top Menu* on page 69
- *View Menus* on page 69
- *Contextual Menus* on page 69

Top Menu

The top menu contains most of the commands. Depending on the view you are working in and the selected element, some commands are available and others not. The top menu is always located at the very top of the user interface.

View Menus

Some views have their own menu containing commands specifically related to that view.
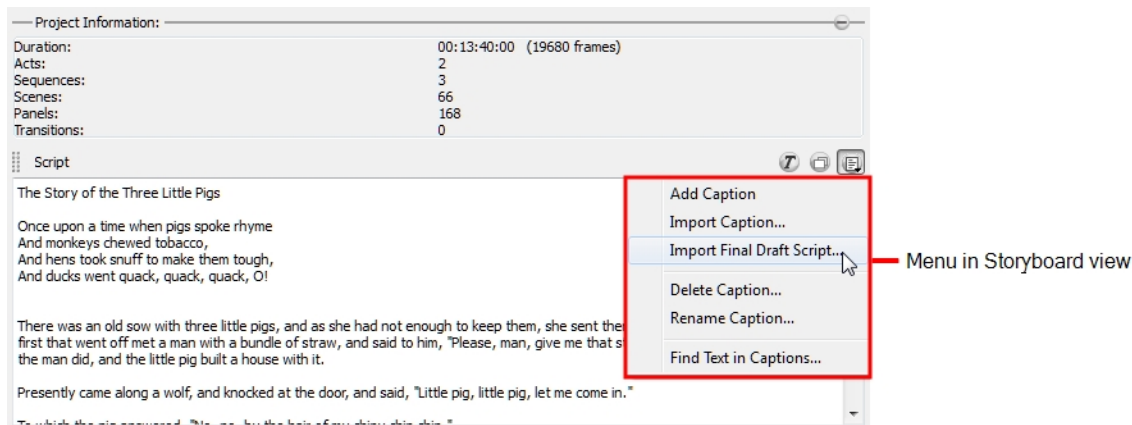
You can find View and Caption menus in the following views:

- *Panel View* on page 65
- *Storyboard View* on page 67
- *Colour View* on page 68

To access the View menu:

‣ In the top-right corner of the Panel, Storyboard, or Colour view, click the View Menu ⊟ button.

Contextual Menus

Each view has a contextual menu containing commands for recurring actions. This menu is accessed by right-clicking (Windows) or [Ctrl]+click (Mac OS X) anywhere in a view.
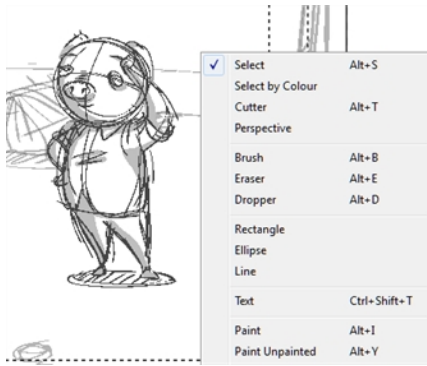
Managing the Views

The Storyboard Pro user interface is comprised of different views, each one designed for a specific purpose. This section explains how you can modify the location and accessibility of the views by adding a new view as a tab or as a window. You can also swap the view locations around.

This section covers the following topics:

- *Adding a View* on page 70
- *Closing a View* on page 73
- *Swapping Views* on page 73
- *Resizing a View* on page 73

NOTE: By default, Workspace modifications are automatically saved. You can restore the default workspaces by selecting **Windows > Restore Default Workspace** from the top menu. You can deselect the *Automatically Save Workspace* on page 86 option from the Preferences dialog box to prevent this behaviour—see *User Interface Preferences - General Tab* on page 85.

Adding a View

Views contain specific groupings of tools that are displayed in the Panel view or as windows that you can position anywhere on your screen. However, you can undock a view that is displayed in the Panel view. When you do this, it becomes a window.

To add a view, do one of the following:

▸ Select **Windows >** *desired view*.

A docked Colour view   Colour view in a window

‣   In a Panel view, click the View Menu ➕ button and select a view from the menu.

To dock a window in the Panel view:

‣   Drag the window's tab onto the Panel view and dropping it in the tab area.

The view is added to the Panel view.

To undock a view:

‣   In the Panel view, drag a view by the tab, moving away from the Panel view.

The view turns into a window.

Renaming a View

You can rename a view's tab temporarily. The new name will remain as long as the views stays open. Once closed and reopened, the tab will display the default name of the selected view.

To rename a view:

1. In the view to rename, click the View Menu ➕ button.

2. Select **Rename Tab** from the list.

   The Rename View Tab dialog box opens.
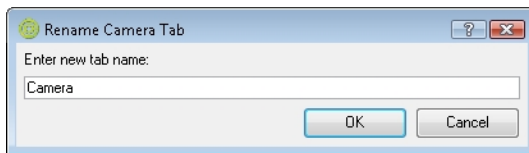
3. Type a new name for the tab you want to rename.

   The view tab is renamed.
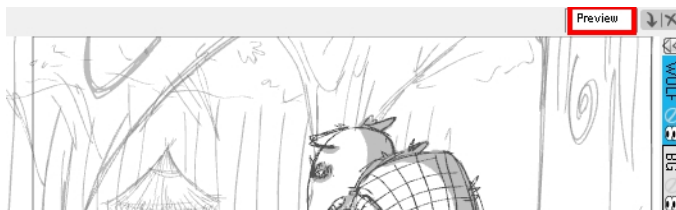
Closing a View

To close a view:

1. In the view to close, click the Close View ⌐✖ button.

2. If you have several tabs in the same window, hold down [Shift] and click the Close View ⌐✖ button to close all tabs together.
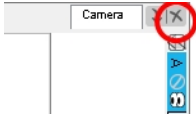
Swapping Views

To swap views:

1. Select the view tab and drag it onto one of the view's separators, top area or onto another view's tab.

2. When a rectangle outline appears showing an available location for the view, release the mouse button and drop the view tab into position. One of three things will happen:
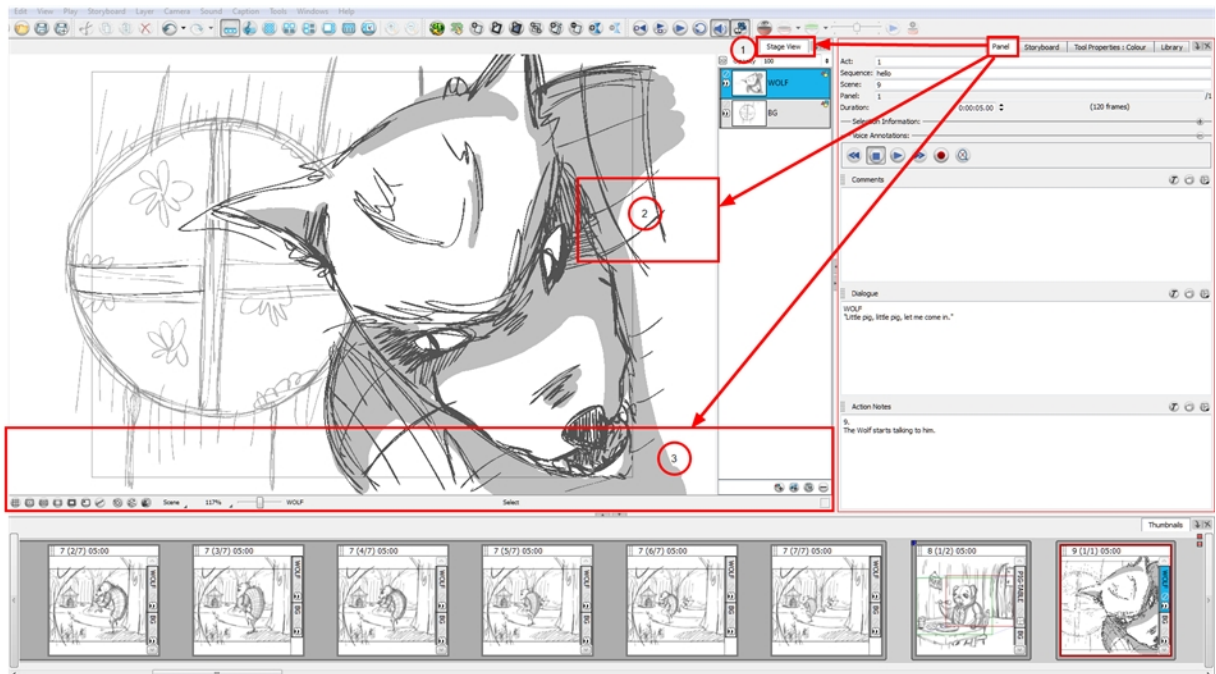
1. The view becomes a tabbed window.

2. The view becomes a floating window.

3. The view becomes a new docked window.

Resizing a View

To change the width and height of the views in the workspace, drag the side of the view.

To resize a view:

1. In the interface, position your cursor at the edge of the view you want to resize.

2. When you see the Resizing cursor, drag the side of the window to the desired width or height.
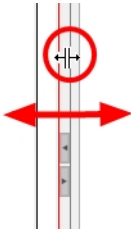
Collapsing and Expanding Views

You can also temporarily hide a view to gain more working space. The collapsed or expanded state of a view will be saved as part of the workspace modifications.

To temporarily hide a view:

1. On the edge of the window you want to hide, click the Collapse/Expand button.
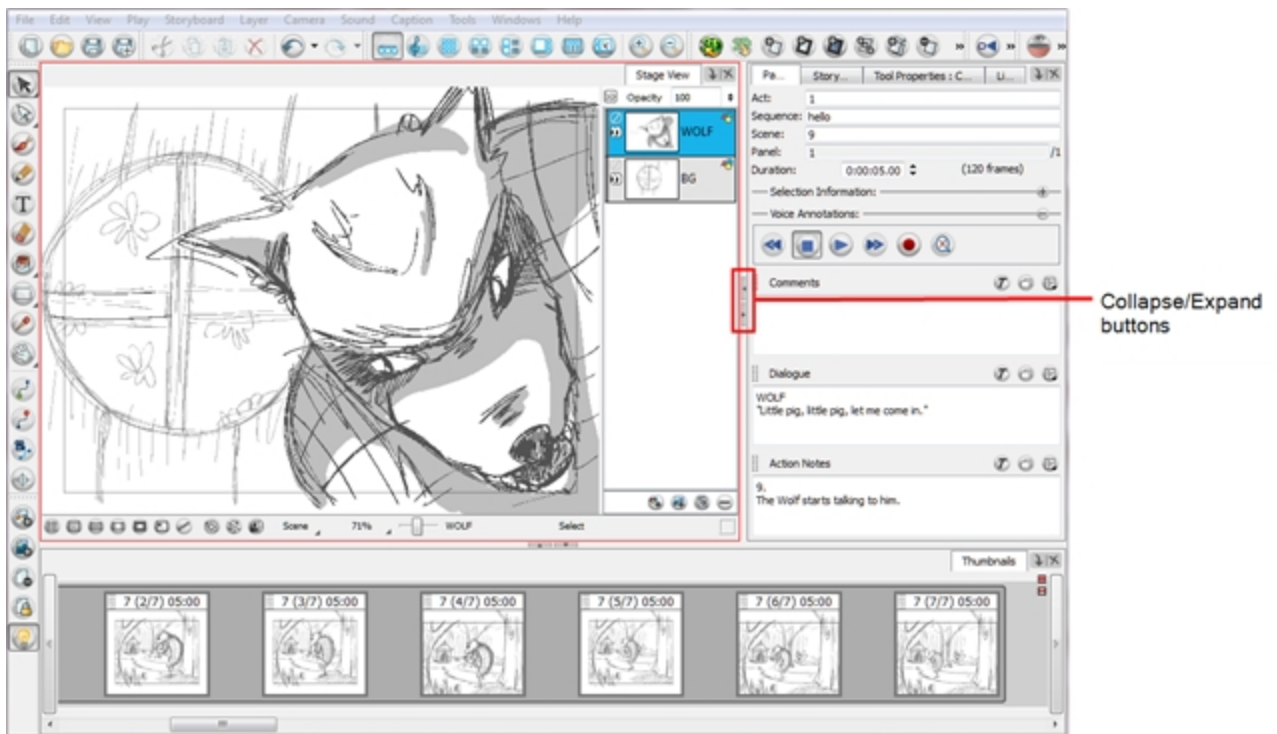
The view is collapsed and only the Collapse/Expand button is visible.

2. Click the Collapse/Expand button to display the view again.

Managing the Toolbars

The Storyboard Pro user interface contains several useful toolbars which you can move around. You can reposition the toolbars to suit your work style or hide unused ones.

This section covers the following topics:

Showing or Hiding Toolbars

To show or hide a toolbar:

‣   Select **Windows > Toolbars >** *toolbar*.

Moving Toolbars

To move a toolbar:

1. Select the toolbar you want to move by clicking its anchor point and dragging it into a view toolbar area or another position in the top or side interface toolbar area.

2. When a rectangle outline appears showing an available location for the toolbar, release the mouse button and drop the toolbar into position.
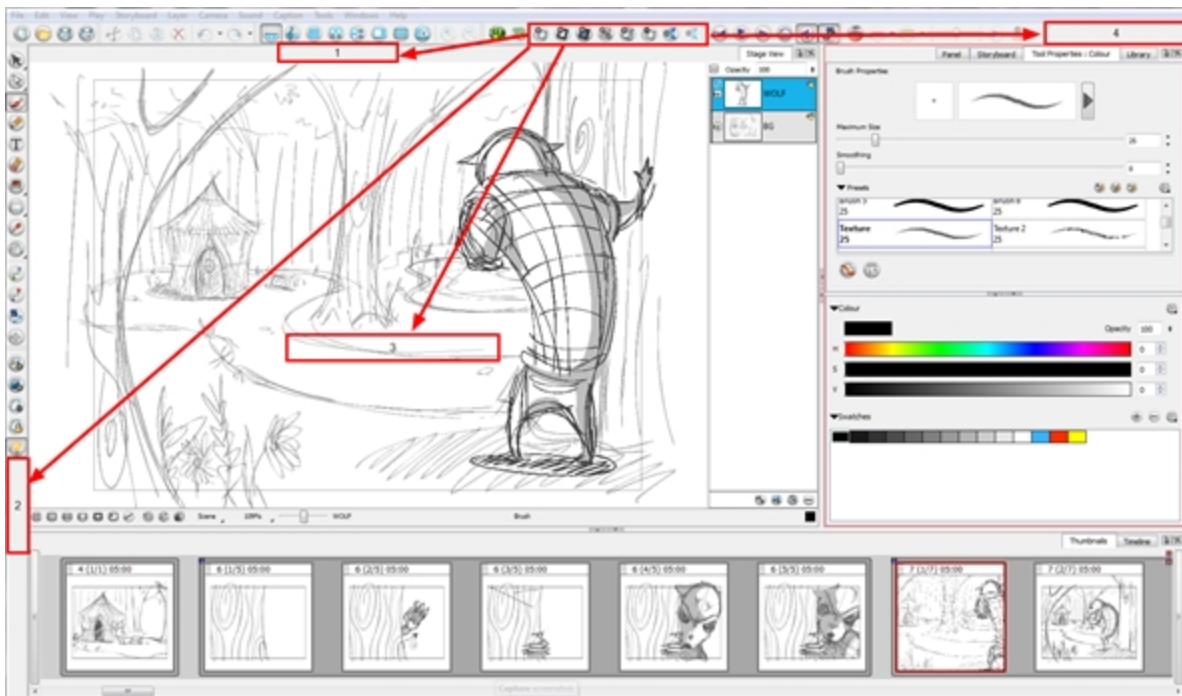
Toolbar Manager

Some of the toolbars can be customized to contain your favourite tools and options. Use the Toolbar Manager window to organize your different toolbars to suit your working preferences.

These are the toolbars that can be customized:

- Layer toolbar

- Storyboard toolbar

- Navigation toolbar

- Sound toolbar

- Tools toolbar

To customize toolbars:

1. Right-click (Windows) or [Ctrl]+click (Mac OS X) on any button in a toolbar and select **Customize**.

   The Toolbar Manager dialog box opens.
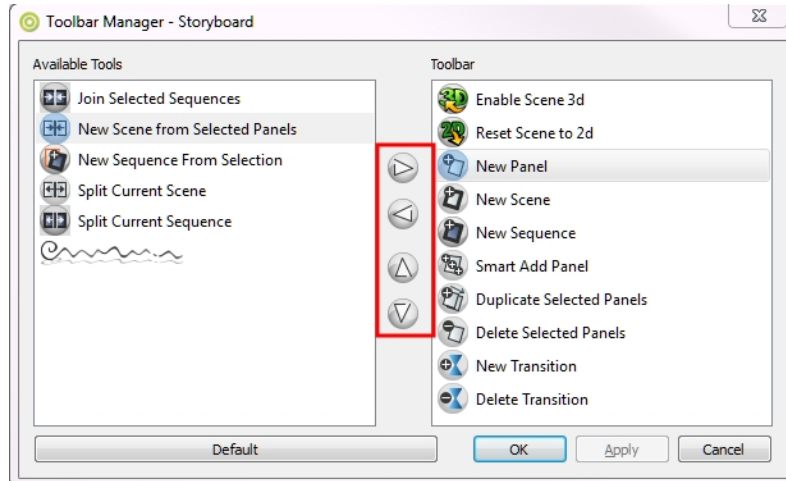
2. Do any of the following:

   ‣ **Add a new icon to a toolbar**: Select a tool/command from the Available Tools list and click the Right ▷ Arrow button.

   ‣ **Remove an icon from a toolbar**: Select a tool/command in the Toolbar list and click the Left ◁ Arrow button to move it to the Available Tools list.

   ‣ **Reorder icons in a toolbar**: Select a to move in the Toolbar list and click the Up △ or Down ▽ Arrow buttons to move it to the correct location.

Customizing the Tools Toolbar

The Tools toolbar can only be customized by changing particular settings in the Preferences.

To enable customizing of the tools toolbar:

1. Open the Preferences dialog box by do:

   ‣ Select **File > Preferences** (Windows) or **Storyboard Pro > Preferences** (Mac OS X).

   ‣ Press [Ctrl] + [U] (Windows) or [⌘] + [,] (Mac OS X).

2. Select the **Global UI** tab.

3. In the Toolbars section, select the **Flat Tool Toolbar** option.

4. Restart Storyboard Pro. Once the software is restarted, you can customize the Tools toolbar.

Managing the Workspace

Storyboard Pro's user interface is comprised of several views. You can customize your workspace to suit your working preferences, save it as a new workspace, and load it from the Workspace toolbar.

This section covers the following topics:

Workspaces

The first time you open Storyboard Pro, the default Drawing workspace is loaded. There are a total of eight ready-made workspaces.

Drawing

This workspace is designed to enable you to draw your storyboard efficiently. The main space is the large Stage View and the Thumbnails view is at the bottom. This workspace also gives you quick and easy access to all your tools as well as the Panel and Storyboard views.

Timeline

This workspace is designed with the process of animatic creation in mind. The main space is the large Stage View and the Timeline view is at the bottom, where you can easily edit the timing of your panels, transitions and sounds. This workspace also gives you quick and easy access to all your tools as well as the Panel and Storyboard views.

Overview

This workspace is designed to provide a well organized overview of your project. The main space is the Thumbnails view where you can efficiently reorganize the order of your panels.

Horizontal

This workspace displays your project as a classic horizontal paper storyboard layout. The main space displays three panels at-a-time, with the panel information shown below each one.

Vertical

This workspace displays your project as a classic vertical paper storyboard layout. The main space displays two panels at-a-time, with the panel information shown at the side of each.

Pitch Mode

This workspace displays your project uses a different set of views than the other workspaces. Access is only given to a certain number of features. This maximizes the viewing space to focus solely on the story being pitched.

The Pitch Mode workspace occupies the entire display screen. There are no toolbars or top menu available.

PDF View

This workspace displays your project with the views required to quickly setup your pdf export.

3D View

This workspace displays your project with the views appropriate for working with 3D objects, including the camera, top view, timeline, and layers—see *Working in a 3D Space* on page 257.

Loading a Workspace

There are several ways to load a workspace in Storyboard Pro.

To load a workspace, do one of the following:

- From the View toolbar, click a workspace button.

1. Drawing
2. Timeline
3. Overview
4. Horizontal
5. Vertical
6. Pitch Mode
7. PDF View
8. 3D View
9. Zoom In
10. Zoom Out

- From the top menu, select **Windows > Workspace > Workspace > *the desired workspace*.**

- Use the keyboard shortcuts [3] to [8] to open the corresponding workspaces, the only exception being PDF View (there is no shortcut for this option, you must use the button on the View toolbar.

Workspace Manager

The Workspace Manager allows you to modify, create, delete, rename, and reorder workspaces.

To open the Workspace Manager:

1. Select **Windows > Workspace > Workspace Manager**.

> **NOTE:** The Workspace toolbar is not displayed in the default workspace. Before using it, you must display it.

To display the Workspace toolbar:

1. Select **Windows > Toolbars > Workspace** from the top menu.

1. In the Workspace toolbar, click the Workspace Manager ⊞ button.

Creating a New Workspace

To create a new workspace:

1. Open the Workspace Manager.

1. In the Available Workspaces list, select an existing workspace.
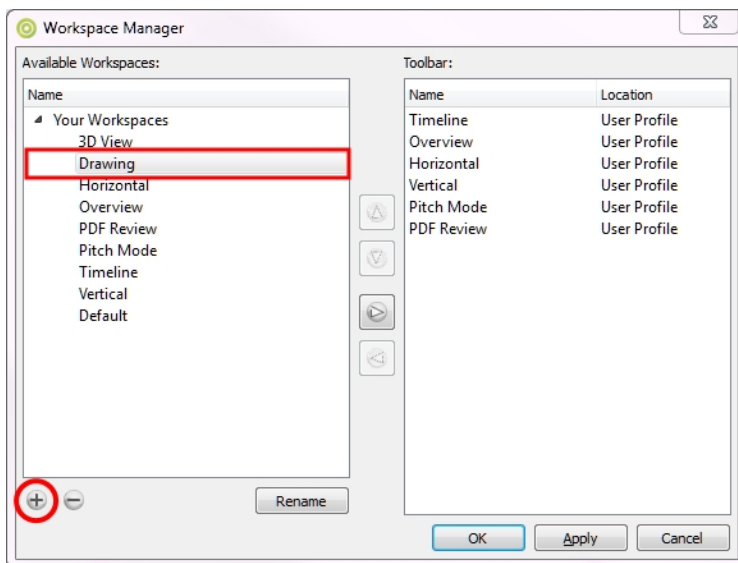
1. At the bottom of the Available Workspaces list, click the Add ✚ button to add a workspace.

1. Select the new workspace you created, then click the Rename button and give it a new name.

1. Select the new workspace and click the Right Arrow ▷ button to send it to the Workspace toolbar.
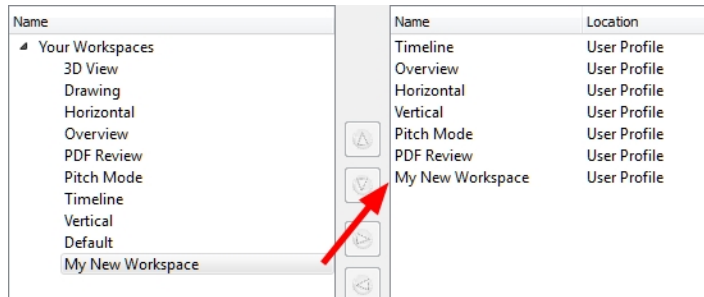
Renaming a Workspace

To rename a workspace:

1. Open the Workspace Manager.

1. From the Available Workspaces column, select a workspace to rename.

1. Click the Rename button.

1. Type in a new name for the workspace.

Saving a Workspace

Storyboard Pro automatically saves the changes made to a workspace. This means that when you resize, move around, add or delete views, your workspace will be automatically saved in its current state.

You can save a workspace manually, or as a new version to avoid overwriting the current one.

To save a workspace manually:

‣ Select **Windows > Workspace > Save Workspace**.

To save your workspace as a new version:

1. Select **Windows > Workspace > Save Workspace As**.

   The Save Workspace As dialog box opens.

1. Type in a name for the workspace.

Deleting a Workspace

To delete a workspace:

1. Open the Workspace Manager.

1. From the Toolbar list on the right, select the workspace to delete and click the Left Arrow ◁ button to send it to the Available Workspaces list. This removes it from the Workspace toobar.
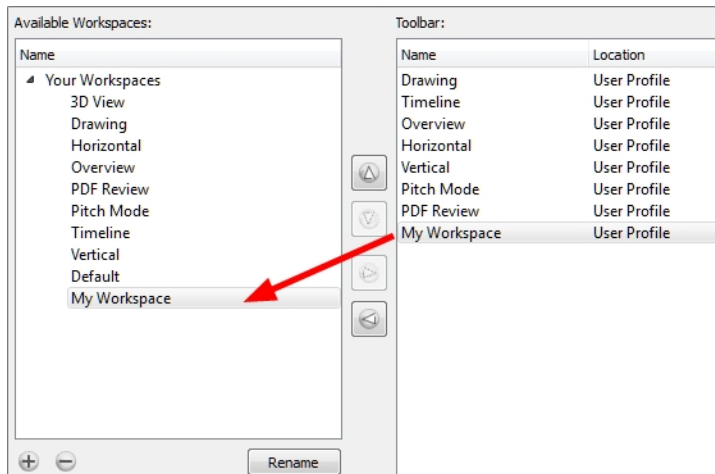
1. From the Available Workspaces list on the left, select a workspace and click the Delete ━ button.

Showing and Hiding a Workspace

You can show and hide selected workspaces from the Workspace toolbar's drop-down menu.

To show a workspace:

1. Open the Workspace Manager.

1. In the Available Workspaces list, select the workspace to be displayed. Click the Right Arrow ▷ button to send it to the Workspace toolbar.

To hide a workspace:

1. Open the Workspace Manager.

1. In the Workspace Manager, select the workspace to be hidden.Click the Left ◁ Arrow button to send it to the Available Workspaces list.

Reordering the Workspace List

You can edit the order that the available workspaces are listed in the Workspace toolbar's drop-down menu.

To reorder workspaces:

1. Open the Workspace Manager.

1. From the Toolbar list, select the workspace to be reordered and click the Up △ or Down ▽ Arrow buttons to move it up or down.
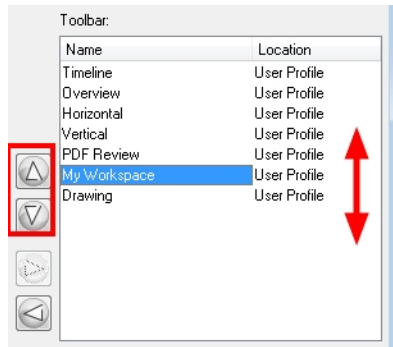
Restoring the Default Workspaces

You can restore the modified workspaces to their original default layout.

To restore the default workspaces:

‣ Select **Windows > Restore Default Workspace**.

Interface Navigation

Storyboard Pro supports Zoom In, Zoom Out, Rotate, Pan and Reset View Position for easy interface navigation.

• **Zoom In:** Zooms into the view. Press [2] or select **View > Zoom In**.

• **Zoom Out:** Zooms out of the view. Press [1] or select **View > Zoom Out**.

• **Zoom In** and **Zoom Out:** Hold down [Spacebar] and your middle mouse button while moving the mouse up or down.

• **Reset Zoom:** Resets the view's zoom to its default position. Press [Shift]+[Z] or select **View > Reset Zoom**.

• **Pan the view:** Hold down the keyboard shortcut [Spacebar] and drag your mouse in the direction you want to pan the view.

• **Reset Pan:** Resets the view's pan to its default position. Press [Shift]+[N] or select **View > Reset Pan**.

• **Reset View:** Resets the view to its default position. Press [Shift]+[M] or select **View > Reset View**.

• **Reset View to Default Drawing Area**: Resets the Stage view to show the default drawing area, which is the space situated inside the default camera frame (before the camera is modified). Select **View > Reset Stage View To > Default Drawing Area**.

• **Reset View to Current Panel**: Resets the Stage view to show the current panel in its entirety. Select **View > Reset Stage View To > Current Panel Overview**.

• **Reset View to Camera Overview**: Resets the Stage view to show an overview of the Camera frames. If a Camera movement was created in the selected panel, it will show the entire space within the camera movement. Select **View > Reset Stage View To > Camera Overview**.

NOTE: This option is only available when the Point of View Mode is set to the Scene or Panel Level–see *Point of View Menu* on page 60. Select **View > Point of View Mode > Scene Level** or **Project Level**.

- **Reset View to Start Camera**: Resets the Stage view to focus on the starting camera position of the camera movement on the current panel.
Select **View > Reset Stage View To > Start Camera Frame.**

NOTE: This option is only available when the Point of View Mode is set to the Scene or Panel Level–see *Point of View Menu* on page 60. Select **View > Point of View Mode > Scene Level** or **Project Level**.

- **Reset View to End Camera**: Resets the Stage view to focus on the ending camera position of the camera movement on the current panel.
Select **View > Reset Stage View To > End Camera Frame.**

NOTE: This option is only available when the Point of View Mode is set to the Scene or Panel Level–see *Point of View Menu* on page 60. Select **View > Point of View Mode > Scene Level** or **Project Level**.

- **Reset Rotation:** Resets the view's rotation to its default position. Press [Shift]+[X] or select **View > Reset Rotation**.
- **Rotate CW:** Rotates the Stage view clockwise, like an animation table. Press [V] or select **View > Rotate View CW**.
- **Rotate CCW:** Rotates the Stage view counter-clockwise, like an animation table. Press [C] or select **View > Rotate View CCW**.
- **Toggle Full Screen**: Maximizes the application on your screen space. Press [Ctrl]+[Shift]+[F] (Windows) or [⌘]+[Shift]+[F] (Mac OS X) once to make the application go full screen, click again to resolve to normal view. You can also select **View > Toggle Full Screen**.

Touch Gestures

Toon Boom Storyboard Pro supports touch gestures. When enabled, you can use the main gestures to navigate in the interface using a supported touch device.

To enable touch gesture:

1. Open the Preferences dialog box by pressing [Ctrl] + [U] (Windows) or [⌘] + [,] (Mac OS X)

2. In the General tab, from the Touch Interface section, select the **Support Gestures** option.

3. If needed:

   ▸ Select the **Invert Scroll Direction** option to invert the touch motion used to scroll up and down.
   ▸ Set the Gesture Sensitivity value.

4. Click OK to close the Preferences dialog box.

Once touch gesture is enabled in your project, you can use the main gestures:

- Use a two-finger pinch to zoom.

- Use two fingers to rotate and pan.

Navigation Toolbar

Storyboards can easily become very extensive projects. The Navigation toolbar is useful for finding your way through storyboard panels and scene.

Displaying the Navigation Toolbar

By default, the Navigation toolbar is not displayed on the interface.

To display the Navigation toolbar:

‣ Select **Windows > Toolbar > Navigation**.

The Navigation toolbar will appear docked at the top of the interface.

Using the Navigation Toolbar

Using the Navigation toolbar is really simple, here are the different buttons and what they do.

First Panel and Last Panel

Use the First Panel and Last Panel buttons to quickly select the first or last panel of the storyboard as the current panel.

Previous Scene and Next Scene

Use the Previous Scene and Next Scene buttons to quickly navigate through all scenes, backward and forward. The first panel of each scene will be selected as the current panel when skipping from one to another. You can also press [Ctrl]+[F] (Windows) or [⌘]+[F] (Mac OS X).

Previous Panel and Next Panel

Use the Previous Panel and Next Panel buttons to quickly navigate through all panels, backward and forward. Each panel will be selected as the current panel as you skip through the storyboard.

First Frame and Last Frame

Use the First Frame and Last Frame buttons to quickly go to the complete beginning or ending of your storyboard. Frames refer to a timing value used when creating your animatic.

NOTE: Refer to the _Animatic_ on page 331 chapter to learn more about animatics and timing.

Preferences

An important feature of Storyboard Pro is the Preferences dialog box which allows you to customize the interface, tools behaviour, and shortcuts.

NOTE: Some preferences require you to exit and restart the application or to close a view and reopen it before changes are applied.

To open the Preferences dialog box:

1. Do one of the following:

   ‣ Select **Edit > Preferences** (Windows) or **Storyboard Pro > Preferences** (Mac OS X).

   ‣ Press [Ctrl] + [U] (Windows) or [⌘] + [,] (Mac OS X).

User Interface Preferences - General Tab

To customize your interface, you will use some of the preferences located in the General , Terminology Style and Touch Interface categories in the General tab.
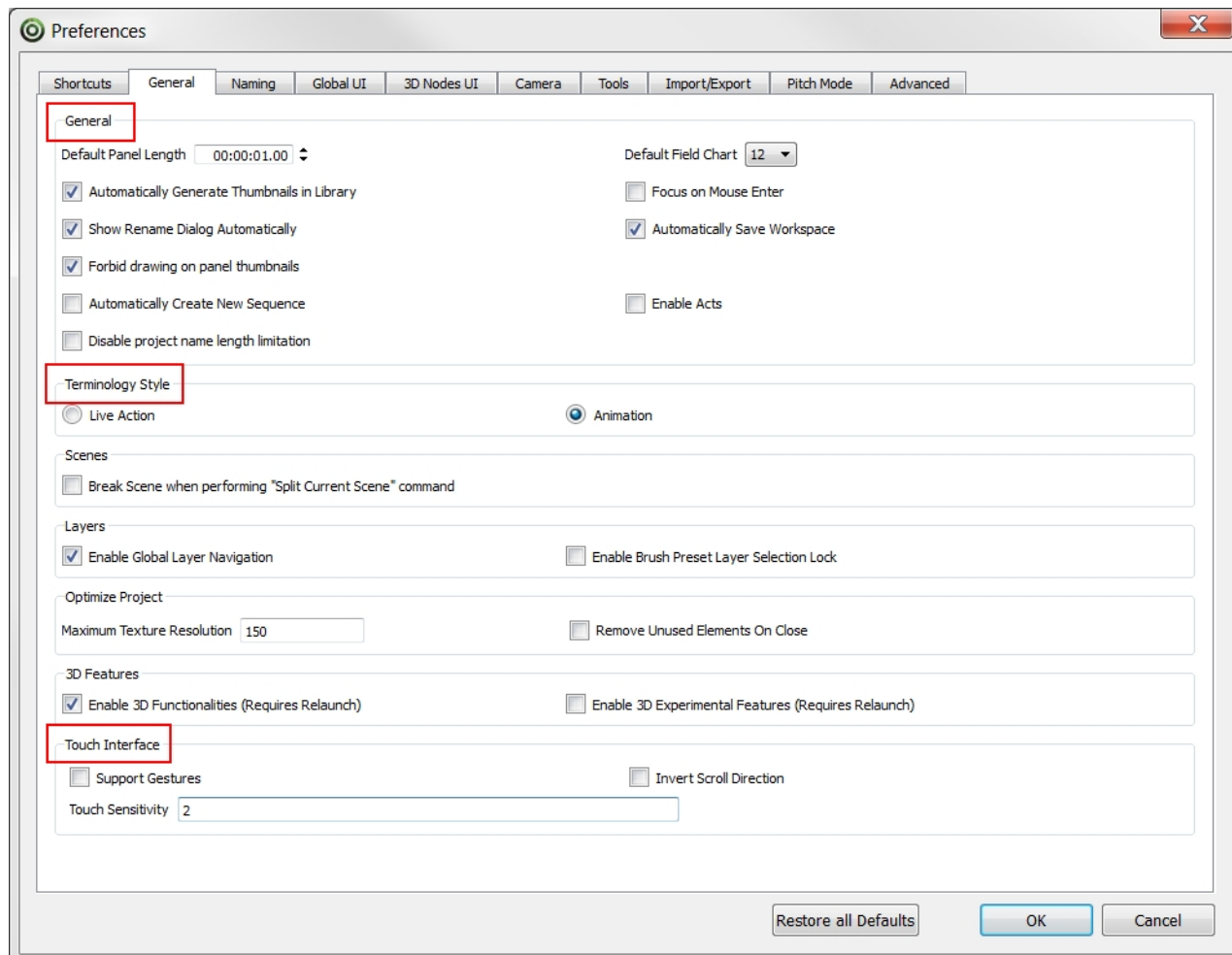
Forbid Drawing on Panel Thumbnails

By default, this preference is enabled, meaning that it is not possible to draw on the panels in the Thumbnails view. You can disable this preference to make it possible to use all of the Drawing tools directly in the Thumbnails view.
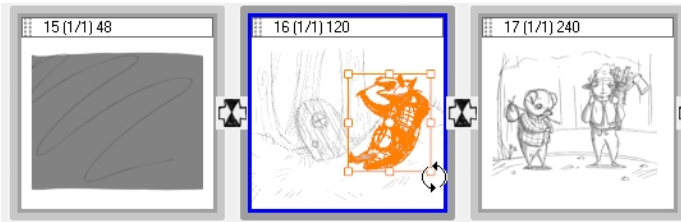
Refer to the *Drawing* on page 175 chapter to learn more about drawing tools.

Default Field Chart

By default, the field chart is set to 12 in Storyboard Pro. However, you can change the field guide to 16 or 24 to suit your project needs.

Focus on Mouse Enter

In order for an operation or keyboard shortcut to work in the view in which you are working, the focus must be on that view. That is, when the focus is on a particular view, a red rectangle appears around its frame. Then you must click in the view or on the view's header to set the focus on that view .

If you enable the Focus on Mouse Enter preference, you will not need to click in the view to obtain the focus. It will be done as soon as your mouse enters the view.

This preference is deselected by default.

> NOTE: If you enable the Focus On Mouse Enter preference, certain operations from the top menu may not be available since the view focus may change as you make your way to the top menu. In this case, use keyboard shortcuts and quick access menus (right-click menus (Windows) or [Ctrl]+click menus (Mac OS X)).

Automatically Save Workspace

This preference is enabled by default. This means that workspace modifications are automatically saved. You can disable this option to prevent this. When this preference is disabled, you can still save the workspace manually by selecting **Windows > Workspace > Save Workspace**.

You can restore the default workspaces by selecting **Windows > Restore Default Workspace** from the top menu.

Refer to the section *Managing the Workspace* on page 77 to learn how to customize your workspace.

Terminology Style

By default, Storyboard Pro is set to use Animation terminology style. This means it will use the word *Scene* as opposed to *Shot* which is more commonly used in live action projects. You can change this preference, so the project and interface uses live action terminology.

To switch terminology styles:

▸ **Live Action**: To use terminology that includes, *act*, *scene*, *shot*, and *panel*.

▸ **Animation**: To use terminology that includes, *act*, *sequence*, *scene*, and *panel*.

> **NOTE:** This guide is written using the Animation terminology style. Some command names will differ when using Live Action terminology, as the user interface will use the concept of Shots rather than Scenes.

Touch Interface

This preference is disabled by default. When enabled,you can use the main gestures to navigate in the interface using a supported touch device.

• **Support Gesture**: Enables touch gesture.

• **Invert Scroll Direction**: Inverts the touch motion used to scroll up and down.

• **Gesture Sensitivity**: Defines the level of sensitivity recognized.

Refer to *Interface Navigation* on page 82 to learn more about using touch gesture to navigate in the interface.

User Interface Preferences - Global UI tab

To customize your interface, adjust the preferences on the Global UI tab.
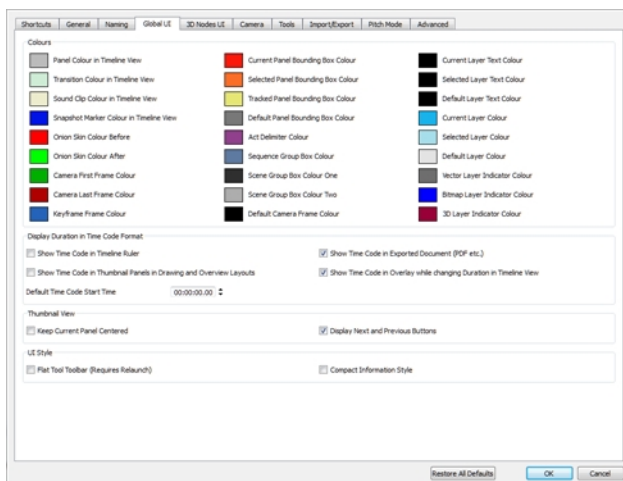
Customize Interface Colours

You can customize some of the colours displayed in the user interface. The colour swatch beside each of the elements listed represents its current colour.

You can modify any of the colours from the list. Some of the changes may require you to restart the application or close the view and reopen it to see them.

- Click a colour swatch and select a new colour from the Colour Picker window.
- To restore all of the default interface's colours, click **Restore All Defaults**.

Display Duration in Time Code Format

In the user interface, the durations are either displayed in time code format or frames. You can use this section of the Global UI tab to decide when to use which format.

- Enabled options use Time Code as the duration format.
- Disabled options use Frames as the duration format.

User Interface Preferences - Advanced Tab

To customize your interface, you will use some of the preferences in the Memory category.
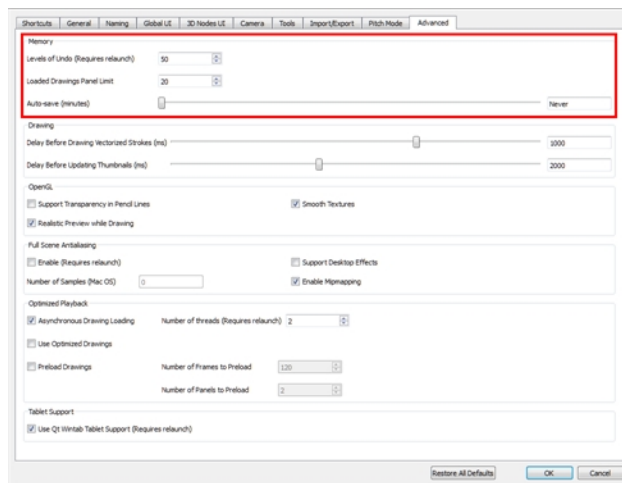
Levels of Undo

The Levels of Undo preference determines the number of actions retained by the Undo list. By default, the system stores 50 actions in the list. You can alter the number if needed.

This preference requires you to restart the application.

Auto-save (minutes)

By default the Auto-save preference is disabled, so it will never auto-save your work. You can enable the Auto-save preference by using the slider to select the interval of time (in minutes) at which your work will be automatically saved.

User Interface Preferences - Camera Tab

To customize your interface, use the preferences in these sections:

- Options
- Point of View

- Safe Areas
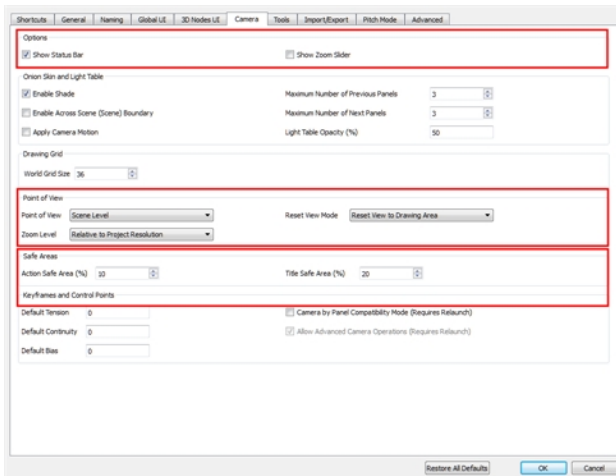
Show Status Bar

To display the status bar at the bottom of the Stage view, enable it in the Options section of the Camera tab. The status bar is not displayed by default.

- **Show Status Bar:** Displays the status bar in the Stage view.

- **Show Zoom Slider:** Adds the zoom slider to the status bar in the Stage view.

Refer to the *Stage View* on page 56 topic to learn more about the options available in the status bar.

Point of View Menu

The Point of View menu lets you determines at which level the current position of the Stage view (zoom, pan and rotation) is remembered when you are flipping through panels.
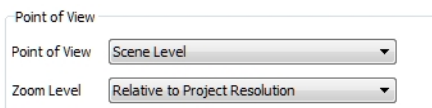
- **Project**: Uses the same zoom, pan and rotation value of the Stage view for all panels of the project.

- **Scene**: Uses the zoom, pan and rotation value of the Stage view only for panels that are part of the current scene.

- **Panel**: Every panel of the project has its own zoom, pan and rotation value.

You can also set the Point of View mode using the top menu or the Status Bar options. Select **View > Point of View Mode > Project Level**, **Scene Level** or **Panel Level**.

NOTE: The current Point of View mode will also affect the different Reset View commands behaviour.

Refer to *Point of View Menu* on page 60 to learn how to set it using the status bar.

Reset View Mode Menu

Use the Reset View Mode menu to define the behaviour of the Reset View command. By default it is set to Reset View to Drawing Area.

> **NOTE:** The three other options will only work when the Point of View Mode is set to the Scene or Panel level. When the Point of View Mode is set to Project level, the Reset View command will reset the view to the default Drawing Area.

- **Reset View to Drawing Area**: Resets the Stage view to show the default drawing area, which is the space inside the default camera frame (before the camera is modified).

- **Reset View to Camera Overview**: Resets the Stage view to show an overview of the Camera frames. If a Camera movement was created in the selected panel, it will show the entire space within the camera movement.

- **Reset View to Start Camera**: Resets the Stage view to focus on the starting camera position of the camera movement on the current panel.

- **Reset View to End Camera**: Resets the Stage view to focus on the ending camera position of the camera movement on the current panel.

- **Reset View to Current Panel Overview**: Resets the Stage view to to fit the camera, regardless of the point of view mode.

You can also use similar commands from the top menu to reset the view to the desired behaviour once, without modifying the default behaviour of the Reset View command. Select **View > Reset View to > *desired option***.

Refer to the *Interface Navigation* on page 82 topic to learn more.

Zoom Level Drop-down Menu

Use the Zoom Level drop-down menu to set the behaviour of the zoom in the Stage view.

- **Relative to Project Resolution**: Makes the zoom information and settings dependent on the project resolution.

- **Relative to View**: Makes the zoom information and settings adjust relative to the size of the Stage view on your screen.

Safety Areas

You can set your own Stage view safety area limits using these two fields. These two values are expressed using a percentage of the view.
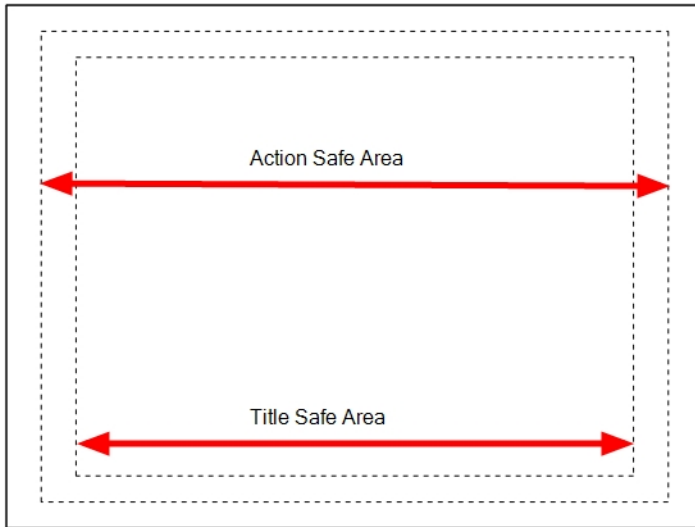
You can display the Safety Area in the Stage view using the Safety Area button from the status bar.

Refer to *Stage View* on page 56 to learn how to show the status bar.

Keyboard Shortcuts

To speed up your work, all of Storyboard Pro's keyboard shortcuts can be customized and you can even choose other software keyboard shortcut sets.

This section covers the following topics:

- *Selecting a Keyboard Shortcut Set* on page 91

- *Customizing a Keyboard Shortcut* on page 92

Selecting a Keyboard Shortcut Set

In Storyboard Pro, you can choose a set of default keyboard shortcuts you are familiar with. You can choose between the following:

- Toon Boom Storyboard Pro (Default)
- Toon Boom Harmony

To switch keyboard shortcut sets:

1. Open the Preferences dialog box by pressing [Ctrl] + [U] (Windows) or [⌘] + [,] (Mac OS X).

2. In the Preferences dialog box, select the **Shortcuts** tab.

3. In the Shortcut Set drop-down menu, select the desired set.
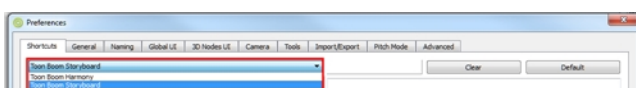
Customizing a Keyboard Shortcut

You can also customize most of the shortcuts by opening the Preferences dialog box and selecting the Shortcuts tab.

To set a shortcut:

1. Open the Preferences dialog box by pressing [Ctrl] + [U] (Windows) or [⌘] + [,] (Mac OS X).

2. In the Preferences dialog box, select the **Shortcuts** tab.

3. In the left window, click the triangle beside a command to expand the list of commands. Select a command to modify.
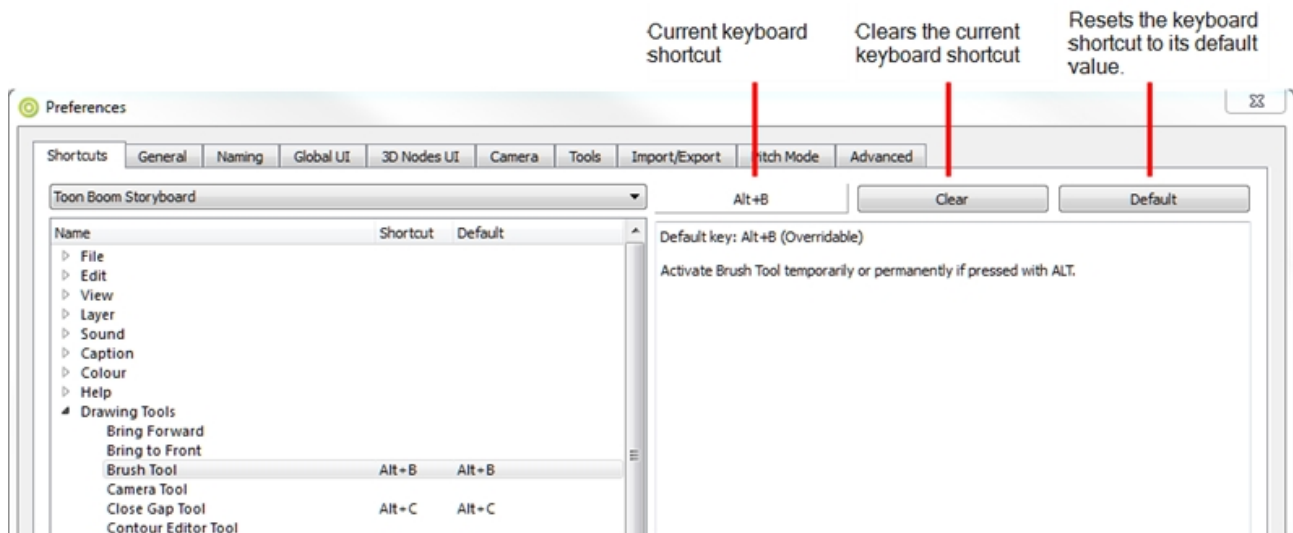
4. On your keyboard, do any of the following:

   ▸ To create a new keyboard shortcut, press the desired keys on your keyboard.
   ▸ To reset a command's default keyboard shortcut, click **Default**.
   ▸ To remove any keyboard shortcut associated to a command, click **Clear**.

NOTE: If a keyboard shortcut is already in use, the Conflict Detected dialog box will appear notifying you of the command to which the shortcut is already associated. You can continue to associate the shortcut or cancel the operation and choose another command.

The Replace button associates the selected keyboard shortcut and removes it from any

Conflict Detected

The following action has the same shortcut key:

· Add Panel (in the Storyboard Category)

Replace   Duplicate   Cancel

The Cancel button stops the operation and lets you select another keyboard shortcut.

The Duplicate button associates the selected keyboard shortcut with the command and allows other commands in the list to use the same one.

To restore the default keyboard shortcuts:

1. Open the Preferences dialog box by pressing [Ctrl] + [U] (Windows) or [⌘] + [,] (Mac OS X).

2. In the Shortcuts tab, click **Restore All Defaults**.

Chapter 4: Script and Panels
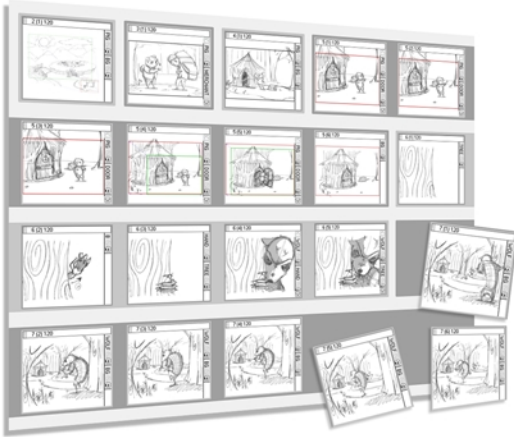
A complete storyboard is not only made of drawing panels, but also includes valuable written directions and information, such as action notes, dialogue, and more. In Storyboard Pro, the editing of these text fields, called *captions*, is as easy as a drag and drop. You can also reorder, rearrange and modify your panels and scenes very easily, without having to go back to the photocopy machine, scissors, and tape.

This chapter includes the following topics:

Importing a Script

A complete storyboard is not only made of drawings, but also dialogue, actions, and valuable indications. In Storyboard Pro, you can easily import a script into your storyboard project to help edit captions.

This section includes the following topics:

Storyboard View

The Storyboard view lets you import a script into your project. By default, this view has a caption field specifically for the script.

As opposed to the Panel view, whose content is sensitive to the selected panel, the contents of the Script panel stays the same no matter which panel is selected, allowing you to easily glance at information for the entire storyboard.

To display the Storyboard view:

▸   Select **Windows > Storyboard**.
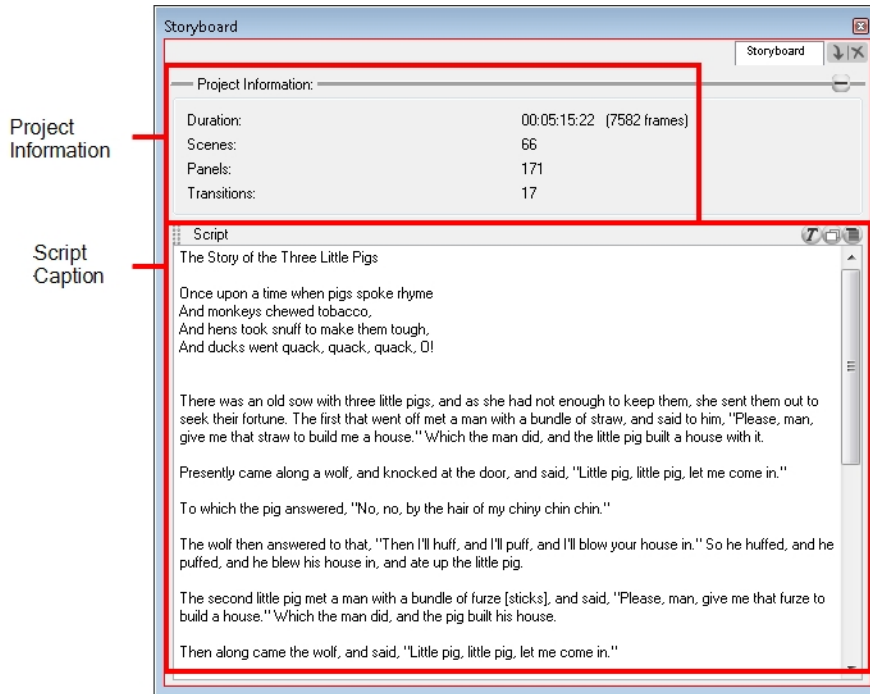
Project Information

This collapsible section of the Storyboard view is where information, such as the duration and number of scenes and panels are displayed. If your storyboard has sequences and acts, the total amount will also be displayed in that section.

You can click on the Collapse ― button to hide the section and leave more room for the Script caption field. Once it is collapsed, you can click the Expand ┿ button to display the entire section again.

Script Caption

This default caption field is specifically there for your script.

You can use the Caption Menu ▤ button to access the import commands and the Text Formatting ⊤ button to display a handy toolbar to format your text. Once a script is imported into the Script caption field, you can drag and drop the text to other caption fields—see *Formatting Text* on page 103 and *Drag and Drop Text* on page 102.

Import Caption

If your script is in `*.txt` or `*.rtf` file format, you can use the Import Caption command to import it into the Script caption.

To use the Import Caption command to import your script:

1. In the Storyboard view, click the Caption Menu ▤ button and select **Import Caption**.

   The Import Caption browser opens.

2. Select your `*.txt` or `*.rtf` file and click **Open**.

   The script appears in the Script caption field.
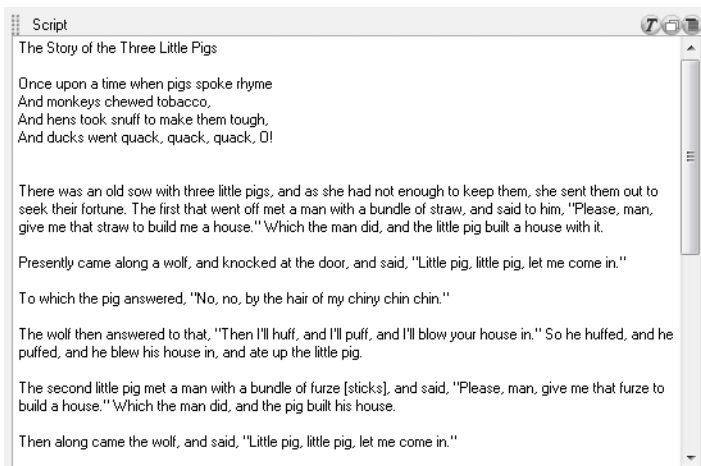
Importing a Script from Final Draft

If you created your script in Final Draft, importing it into Storyboard Pro should be your next step. While importing your Final Draft script, you will retain the rich text formatting.

If you are working with Final Draft version 8, you can import the project file which is a `*.fdx` file. If you are working with Final Draft 7, you must export your project as an `*.xml` first—*See Exporting Your Final Draft Version 7 Script as an *.XML File below.*
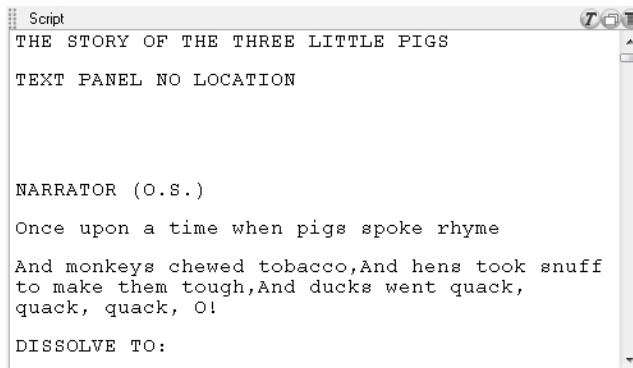
To import your Final Draft script:

1. In the Storyboard view, click the **Caption Menu** button and select **Import Final Draft Script**.

   The Select Final Draft browser opens.

2. Select your Final Draft `*.fdx` or `*.xml` file and click **Open**.

   The script appears in the Script caption field with all notes and formatting intact.

   Script

   ```
   THE STORY OF THE THREE LITTLE PIGS

   TEXT PANEL NO LOCATION



   NARRATOR (O.S.)

   Once upon a time when pigs spoke rhyme

   And monkeys chewed tobacco,And hens took snuff
   to make them tough,And ducks went quack,
   quack, quack, O!

   DISSOLVE TO:
   ```

> **NOTE:** lif you are working with Final Draft 8, Storyboard Pro can directly import the `*.fdx` project file. If you are working with Final Draft 7 and earlier, you must export your project from Final Draft as an `*.xml` first, so you can import it in Storyboard Pro.

Exporting Your Final Draft Version 7 Script as an *.XML File

Here is a simple step by step to help you export your Final Draft `*.fdr` project to an `*.xml` file using Final Draft Tagger in version 7.

To export a Final Draft version 7 script as an *.xml file:

1. Start the Final Draft Tagger software.

2. Select **File > Import Script**, the keyboard shortcut is [Ctrl]+[I] (Windows) or [⌘]+[I] (Mac OS X).

   The Import dialog box opens.

3. In the browser, select your script file and click **Open**.

   Your script appears in Final Draft Tagger.
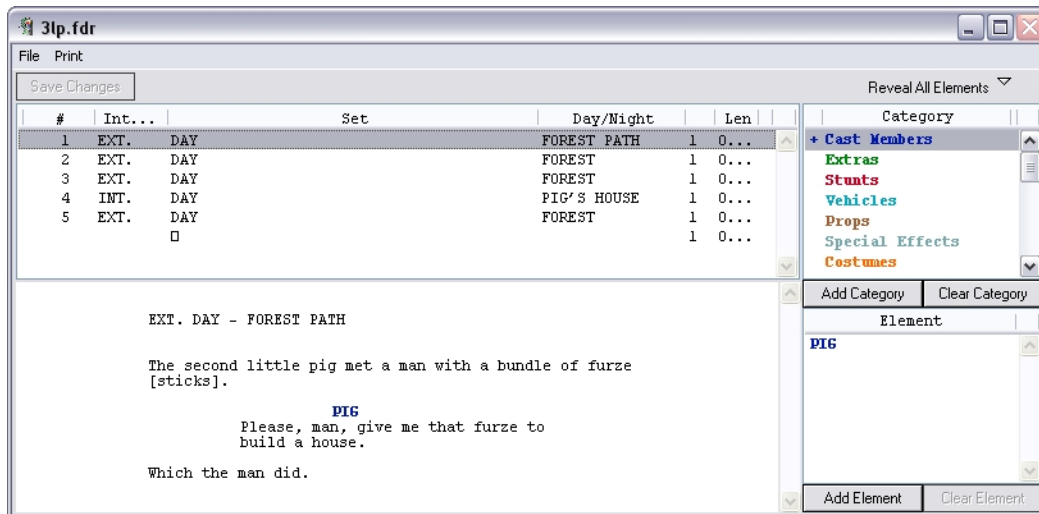
4. Select **File** > **Export to XML**.

5. Close the Final Draft Tagger application.

Captions

Captions are text fields you can edit to include special indications and notes specific to a panel in your storyboard. These texts indications can be dialogue, action notes, sound effects, and more. You can customize the captions to include any information that's pertinent to your project.

This section includes the following topics:

- *Panel View* on page 99

- *Expanding and Collapsing Captions* on page 106

- *Adding Captions to the Storyboard* on page 107

- *Adding Captions to the Panels* on page 107

- *Adding a Sketch Caption to a Panel* on page 108

- *Deleting Captions* on page 109

- *Renaming Captions* on page 109

- *Saving the Caption Layout as Default* on page 110

- *Updating Captions from CSV* on page 110

Panel View

To add information to a particular panel, you will use the Panel view. This view displays the different captions related to a panel, as well as other useful information.

The Panel view always shows the information and captions of the selected panel.
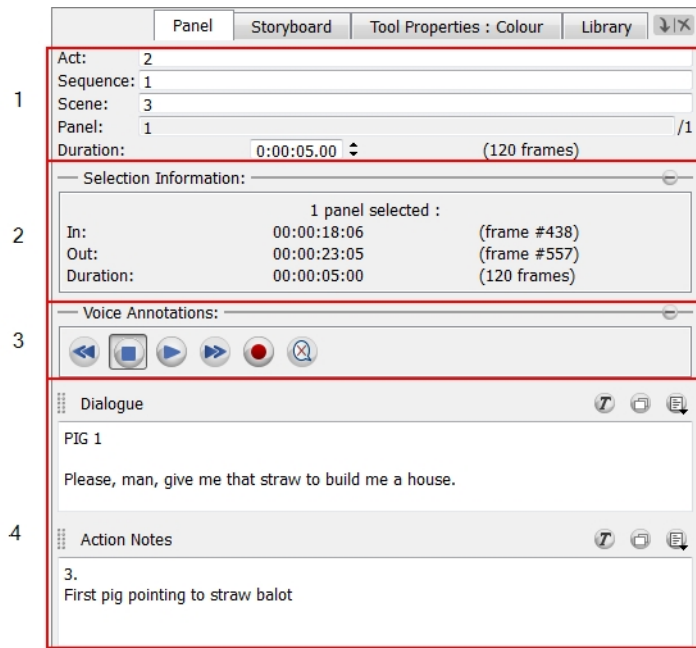
1. *Panel Information* on page 100
2. *Selection Information* on page 101
3. *Voice Annotations* on page 101
4. *Panel Captions* on page 101

Panel Information

This section of the Panel view is where you will find information such as the duration of the current panel, its name and the name of the scene it is part of. You can use the Scene and Panel fields to rename the current selection.

You can also use the Duration field to edit the panel's duration—see *Renaming Scenes* on page 119, *Renaming Panels* on page 126 and *Animatic* on page 331.

Selection Information

This collapsible section of the **Panel** view is where to find information such as the number of panels selected, the timing and frame number where the selection starts and ends, as well as the total duration of the selected panels. These fields are for reference only as they are not editable. You can click on the Collapse — button to hide the section and leave more for the Script caption field. Once it is collapsed, you can click on Expand + button to display the entire section again.

Voice Annotations

It is possible to add voice annotations to a panel. This collapsible section is used to control and edit these annotations—*See Storyboard Supervision on page 427.*

Panel Captions

There are several fields which are collectively known as panel captions, these are the default names:

- **Dialogue:** Type or copy/paste dialogue character dialogue into this field.

- **Action Notes:** Type or copy/paste notes related to the action occurring in the scene into this field.

- **Slugging:** Add notes referring to the timing of the storyboard. Slugging is the timing of the individual recorded lines of dialogue against the board.

- **Notes:** Add general notes about the panel here.

The caption fields are named by default, you can easily change the name of these fields.

To rename a caption:

1. Click the Caption Menu ▤ button and select **Rename Caption**.

2. Once you have changed the names of the captions and you are certain that you want to keep these names throughout the project you can set the new names as default by clicking on **Caption** menu in the main menu bar and selecting **Save Captions Layout as Default**.

You can also choose to hide any of the caption categories from being displayed in the Panel view.

To hide a caption from the Panel view:

1. From the top menu, select **Caption > Show/Hide Captions**.

   The Show/Hide Captions dialog box opens.
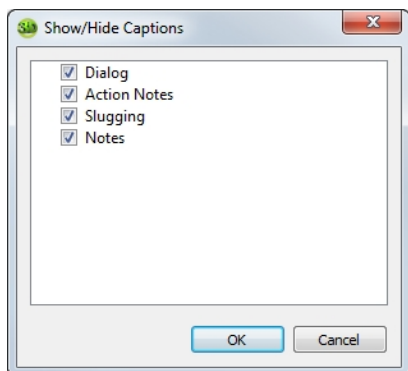
2. Deselect any captions that you want to hide. If you have added your own custom captions, they should appear in the list. Any captions that you renamed appears as you renamed them.

You can use the Caption Menu ⬛ button to access the commands related to your caption fields, and the Text Formatting 𝘛 button to display a toolbar to format your text–see *See Adding Text to Panel Captions below.*

NOTE: When working in the Drawing workspace, you can quickly switch the focus from the Panel view to the Stage view by pressing Esc].

Adding Text to Panel Captions

There are several ways to add text to a Caption field, and editing it is very easy.

This section includes the following topics:

- *Drag and Drop Text* on page 102
- *Typing Text* on page 103
- *Formatting Text* on page 103
- *Find Text in Captions* on page 105

Drag and Drop Text

The quickest and easiest way to add text to your caption fields is to drag and drop it. For example, if you imported your script into the Storyboard view's Script caption field, you can select the text you need and drop it in the desired panel's caption field.

To drag and drop text from your imported script:

1. (Optional) Switch to the Vertical workspace by clicking the **Vertical Workspace** ⊟ button or selecting **Windows > Workspace > Workspace > Vertical**.

2. In the Thumbnails view, select the panel to which you want to add text to a caption.

3. In the Storyboard view:

   ‣ In the Vertical workspace, the Storyboard view is on the right side of the screen, under the Panel view. Click the **Storyboard** tab to switch to this view.

   ‣ If the Storyboard view is not displayed in your workspace, select **Windows > Storyboard**.

4. In the Script caption field, highlight the part of the text you want to drag and drop.

NOTE: You can drag and drop text from any caption field to another; it does not absolutely have to be from the Script caption.

---

5. In the Script caption, click and drag the selected text and drop it in the destination caption of your panel.
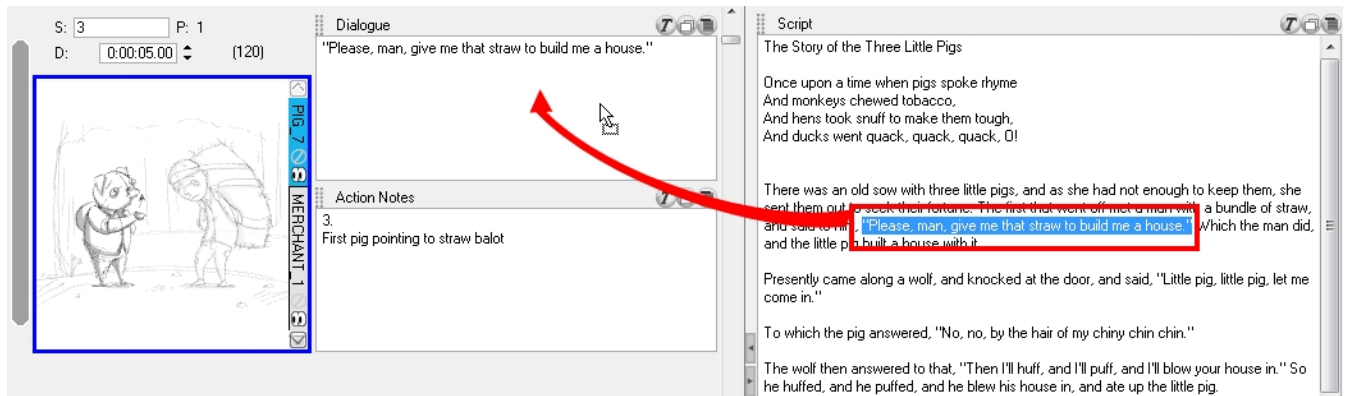
6. Repeat this until you have copied all the necessary text into your project's caption fields.

Typing Text

If you did not import a script, or if you want to add more text, you can simply type in the needed indications and information into the caption field of your choice.

To type text in a caption field:

1. In the Thumbnails view, select a panel.

2. In the Panel view, click in a caption field to activate text edit, then type the information, dialogue, or notes you need.
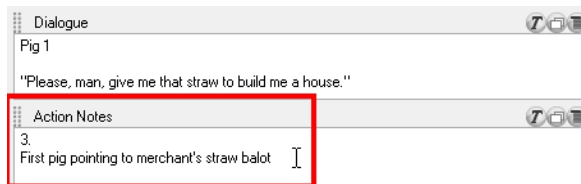
In the default workspace, the Panel view is displayed on the right of the Stage view.

‣ If the Panel view is not in your current workspace, select **Windows > Panel**.

NOTE: You can also copy and paste text from external applications such as Microsoft sWord or from a PDF files.

Formatting Text

Once you have imported, dragged and dropped, or typed some text into your storyboard captions, you can use the Text Formatting toolbar to enhance it.

To apply Rich Text formatting to caption text:

1. In the Panel or Storyboard view, click the Text Formatting ⊤ button of a caption.

2. In a caption, select the text you want to format.

3. Use the Text Formatting toolbar buttons and options to edit the text.

    ‣ **Font Type**: Choose the font type of your choice from this menu.

    Helvetica

    ‣ **Font Size**: Change the size of the text using menu.

    11

    ‣ **Bold:** Click the Bold B button to change the text to bold.

    ‣ **Italic:** Click the Italic I button to change your text to italic.

    ‣ **Underline:** Click the Underline U button to underline your text.

    ‣ **Align Left**: Click the Align Left button to align your text to the left.

    ‣ **Centre**: Click the Centre button to centre your text.

    ‣ **Align Right**: Click the Align Right button to align your text to the right.

    ‣ **Justify:** Click the Justify button to justify your text.

    ‣ **Colour**: Click the Colour button to open the Select Colour dialog box and choose a new colour for your text.

Find Text in Captions

You can search captions to find a specific part of your text. This can become very handy when you have a large number of captions and text in your project.

To find text in captions:

1. In the Panel or Storyboard view, select any caption field.

2. Click the Caption Menu [icon] button and select **Find Text in Captions**. You can also select **Caption > Find Text in Captions** from the top menu or press [Ctrl]+[Shift]+[F] (Windows) or [⌘]+[Shift]+[F] (Mac OS X).

   The Find Text in Captions dialog box opens.
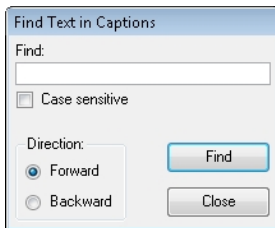
3. Edit the search options:

   ‣ In the Find field, type in the word you are looking for.

   ‣ Select the **Case sensitive** option to have the search consider the case of the word.

   ‣ Select **Forward** or **Backward** for the search direction.

4. Click **Find**.

   The caption containing the first word fitting your search options is displayed in either the Storyboard or Panel view, and the word is highlighted in yellow. The Find Text in Captions dialog box displays information about the caption in which the word was found.
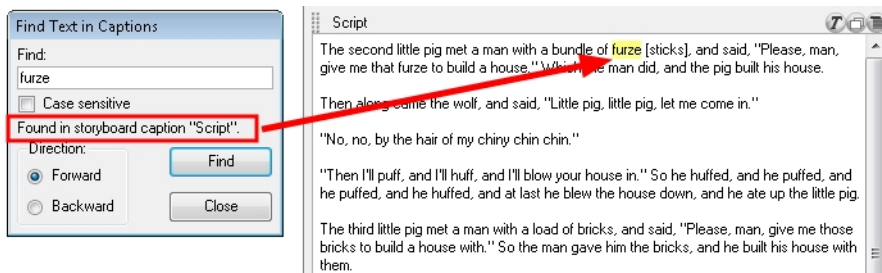
5. Click **Find** to display the next results.

Expanding and Collapsing Captions

When you have more than one caption field in a panel, you can use the Expand and Collapse ⬚ button to expand and collapse them.

To expand and collapse captions:

1. Display the Panel or Storyboard view. Note that there must be more than one caption field in a panel in order to be able to collapse or expand one.

2. Click the Expand and Collapse ⬚ button of the desired caption.
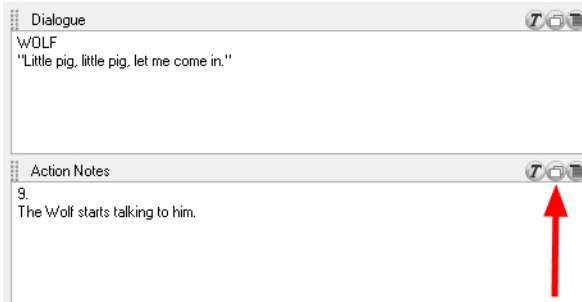
3. On the first click, the selected caption expands and the other ones collapse.
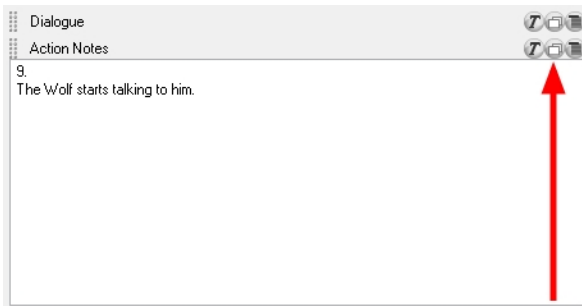
4. On the second click, the selected caption collapses and the other ones expand.
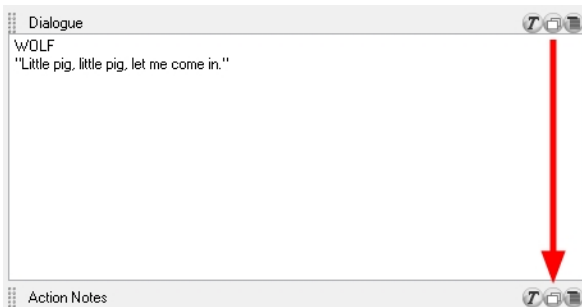
5. On the third click, all the captions return to their original state.
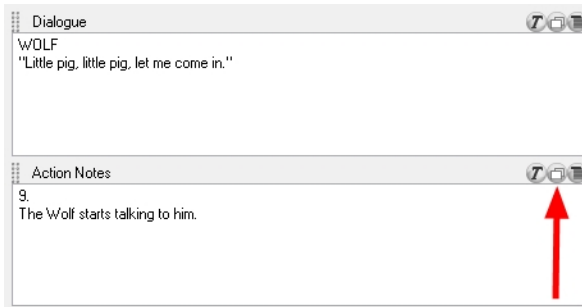
Adding Captions to the Storyboard

In the Storyboard view, by default, there is only one caption field which is called *Script*. If you need to, you can add more captions to this view.

To add captions in the Storyboard view:

1. In the Storyboard view, click the Script Caption Menu button and select **Add Caption** or select **Caption > Add Caption to Storyboard**.

   The Choose Field Name dialog box opens.

2. Type a name for your new Caption field.

   The new caption appears below the Script caption. This one is named `Director Notes`, for example.
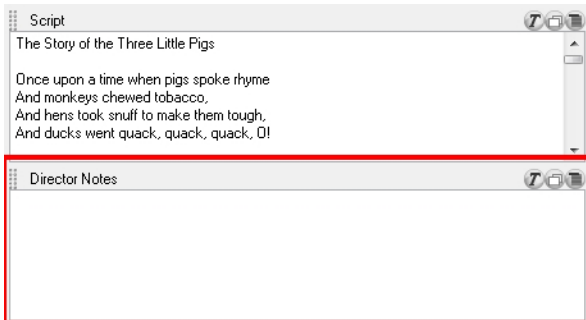
Adding Captions to the Panels

In each panel, there are two caption fields: Dialogue and Action Notes. If you need to enter more information, you can always add a new caption for your panels.

To add captions to a panel:

1. In the Thumbnails view, select a panel.

2. In the Panel view, click one of the Caption Menu buttons and select **Add Caption** or select **Caption > Add Caption to Panels**.

   The Choose Field Name dialog box opens.

3. Type a name for your new Caption field. In the following example below, "SFX" was typed.

   The new caption appears below the existing ones, and is available for every panel of your storyboard.
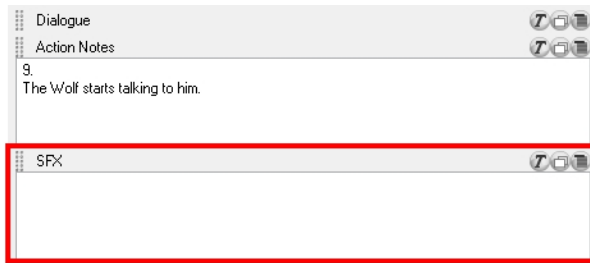
Adding a Sketch Caption to a Panel

Just like in a traditional storyboard, you can add drawn indications to a panel's caption. For this, you need to add a Sketch caption to your panel.

NOTE: You cannot add a sketch caption to the Storyboard view.

To add a sketch to a panel:

1. In the Thumbnails view, select the panel to which you want to add a sketch.

2. In the Panel view, click one of the Caption Menu buttons and select **Add Sketch** or select **Caption > Add Sketch to Current Panel**.

   The Choose Field Name dialog box opens.

3. Type a name for your Sketch field.

   The Sketch field appears below the existing captions for this panel only.
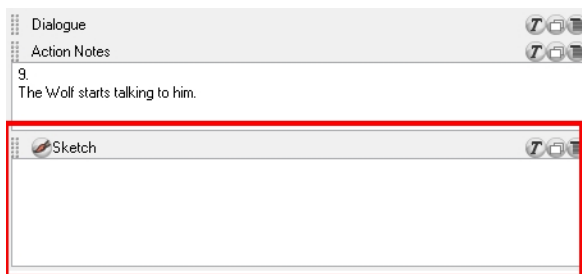
4. Once you added a Sketch caption field, you can use any drawing tool to sketch in it—see *Drawing* on page 175 and *Adding Colour* on page 289.
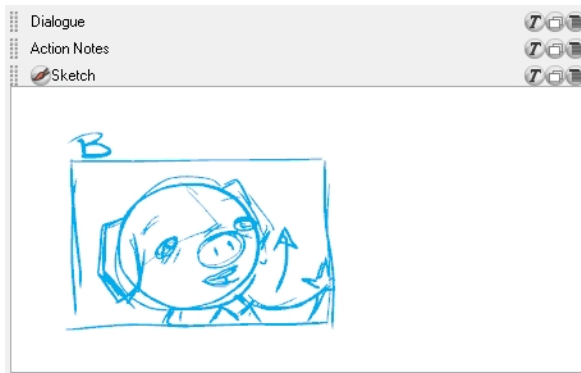
Deleting Captions

If you have a caption that is no longer needed, you can delete it. But be careful, if you remove a caption that has been filled with text or a sketch, they will both be removed permanently.

To delete captions:

1. Display the Panel or Storyboard view, depending on whether it is a panel caption or storyboard caption you want to delete.

2. In the Panel or Storyboard view, click the Caption Menu 📄 button for the caption you want to delete and select **Delete Caption**. You can also select **Caption > Delete Caption >** select a caption to delete from the list.

   A warning message opens.
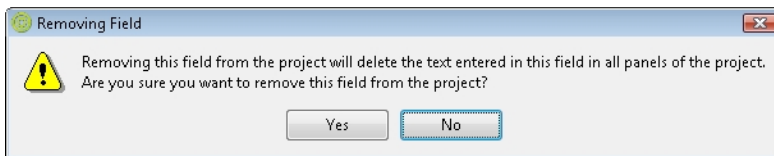
   ‣ If you are sure you want to delete the caption, click **Yes**.
   ‣ If you want to cancel the process, click **No**.

Renaming Captions

You can easily rename a caption.

To rename a caption:

1. Display the Panel view or Storyboard view, depending on whether it is a panel caption or a storyboard caption you want to rename.

2. In the Panel or Storyboard view, click the Caption Menu 📄 buttons for the caption you want to rename and select **Rename Caption**.

   ‣ You can also use the top menu to rename captions. Select **Caption > Rename Caption >** select the caption you want to rename from the list.

   The Renaming a Field dialog box opens.

3. Type a new name for your caption field.

    The selected caption field is renamed.

Saving the Caption Layout as Default

When you are satisfied with your current caption combination and layout, you can save it as the default caption layout for any future Storyboard Pro projects. The next project you create will automatically have this layout by default.

To save the caption layout as default:

‣ Select **Caption > Save Captions Layout as Default**.

Updating Captions from CSV

In Storyboard Pro, you can efficiently update the captions in your project. If you generate a `*.csv` sheet (comma separated values) from your project, you can update the file, then import it into Storyboard Pro. Doing so will update all caption fields automatically. You must first generate the CSV from your current project.

To generate a CSV from your current project:

1. Make sure your caption fields are up to date, and save your project.

2. Select **File > Export > CSV**.

    The Export to CSV dialog opens.
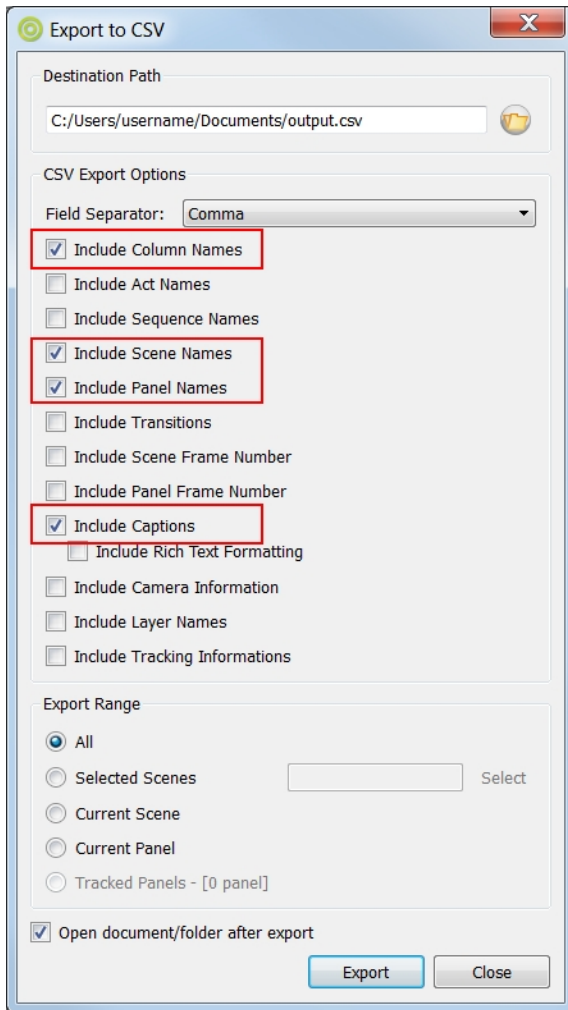
Make sure these options are selected before you export:
- Include Column Names
- Include Scene Names
- Include Panel Names
- Include Captions

Once you have generated the CSV, you can update it in your spreadsheet if there are major changes, such as the dialogue. Working this way allows you to import the updated CSV into Storyboard Pro and have all caption fields updated.

To use the Update Captions from CSV option:

1. When you open the `*.csv` file in your spreadsheet application, select the field separator you used (i.e.: a comma).
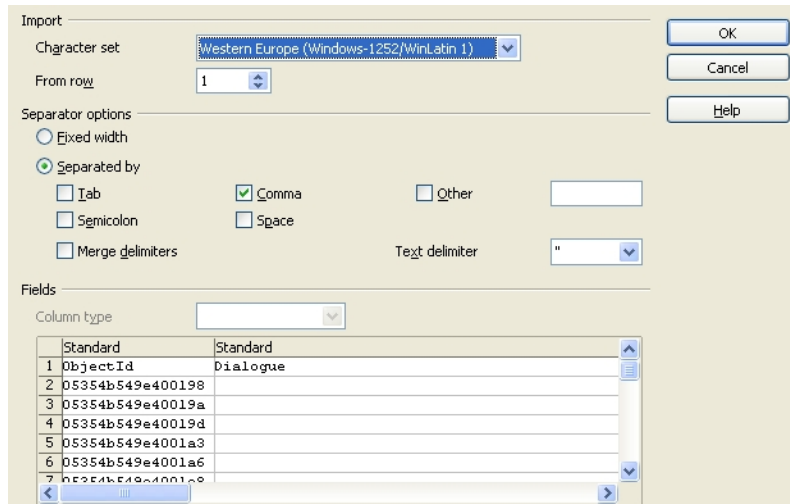
The heading of each column contains the name of the caption field. Use this to determine where to add your caption updates.

2. Find the captions you need to modify within the `*.csv` file. When you are finished, save and close your file.

3. Open the Storyboard Pro project you want to update.

4. From the top menu, select **File > Update Captions from CSV**.

   The Import CSV dialog box opens.

5. Browse to the folder that contains your `*.csv` file, select it, and click **Import**.

6. In the Report section, notice which caption fields have been updated.
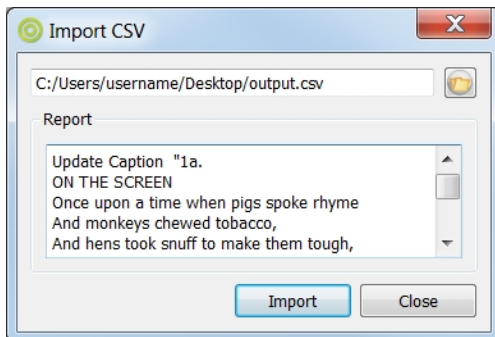
Any captions you modify in the `*.csv` file are also updated in the caption fields of your Storyboard Pro project.

CSV files exported from Storyboard Pro are UTF-8. CSV files can be modified in Excel if all the characters are part of the latin character set. If non latin characters are used, the CSV files can be edited using Open Office.

CSV files exported from Storyboard Pro can be edited in either Microsoft Excel or Open Office.

> **IMPORTANT:** Excel does not display non-English characters properly and will not recognize them when importing to Storyboard Pro.

Scenes and Panels

To build and organize your storyboard project, you will use panels, scenes, sequences, and acts. You have many options to customize these project elements in order to keep things clear and organized.

This section includes the following topics:

What are the Differences between Sequences, Scenes, Panels and Acts?
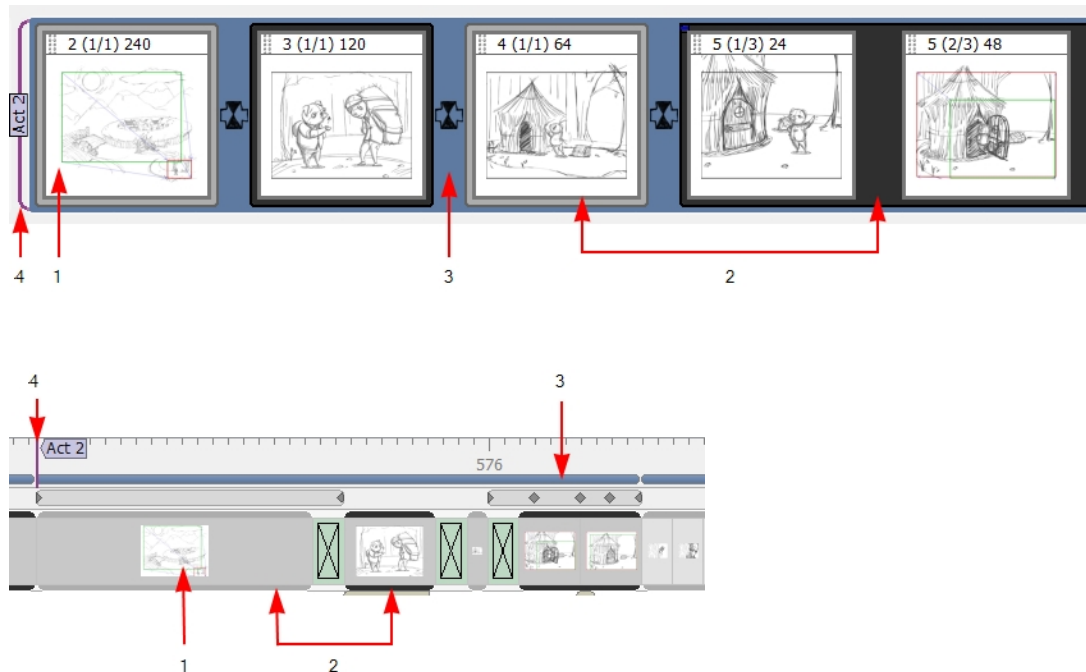
1. A panel represents an action and is the smallest element of the three. You should use multiple panels whenever you need more than one drawing to clearly express the acting within a scene. It is the white rectangle representing the camera view. By default the current panel will be highlighted in red in the Thumbnails view.

2. A scene is composed of one or several panels. In animation, whenever the camera angle changes, you should create a new scene. In live action, this is called a *shot.*In other words, if your action goes from a mid shot to a close shot, each of these shot should be a different scene. By default, a grey rectangle connects the different panels of a scene together.

3. A sequence is a series of scenes that should be grouped together. Usually, scenes are grouped together by location. For example, all the scenes that are taking place in one location, should be in the same sequence and as soon as there is a change of location, it should be a new sequence. by default, a blue line connects the different scenes of a sequence together.

4. An act is composed of one or several scenes and sequences. An act usually represents a story arc. It can be a certain time lapse in the story. For example, all the scenes in the first half of a TV series are one act, and the second act is after the commercial break. As for movies, live action, or even video games, there could have several different story arcs. In Storyboard Pro, a purple flag shows the beginning of a new act.

Scenes

In Storyboard Pro, you can easily create, import, rename, split and delete scenes.

This section contains the following topics:

Creating Scenes

To create a scene:

▸ In the Storyboard toolbar, click the New Scene 🗗 button or select **Storyboard > New > New Scene**.

A new scene, containing one blank panel, is added after the current scene.
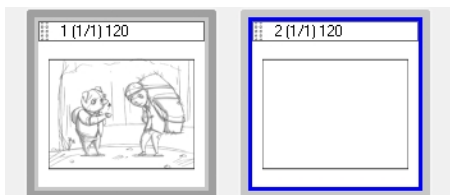
Create Scene Before

You can also create a scene that will appear before the current scene.

To create a scene before current scene:

▸ Select **Storyboard > New > New Scene Before**.

A new scene containing a blank panel is added before the current scene.
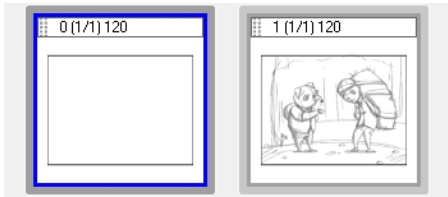
Creating a Scene from Selected Panels

A scene can be created from a selection of panels.

To create a scene from a selection of panels:

1. In the Thumbnails or Timeline view, select one or more consecutive panels.
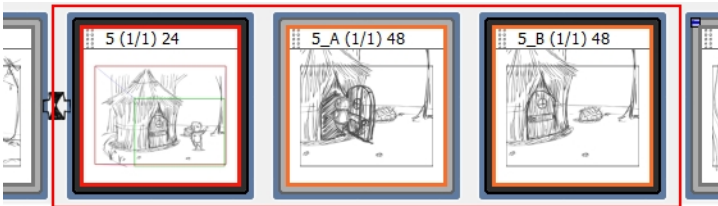
2. Select **Storyboard > New > New Scene from Selected Panels**.
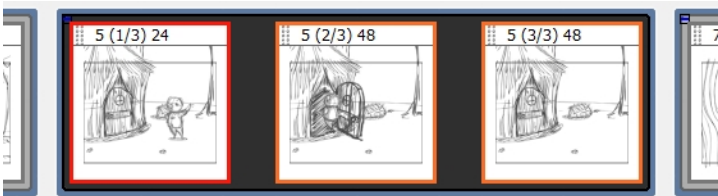
The selected panels are joined together within the scene.

Selecting All Panels in a Scene

You can select all the panels in a scene, using the Select All Panels in Scene command.

To select all the panels of a scene:

1. In the Thumbnails or Timeline view, select one panel inside the scene you want to select all panels from.

2. Select **Edit > Select All Panels in Scene**.

Import Images as Scenes

You can import one or several images and have Storyboard Pro automatically create a new scene for each. Use this option if you have a series of bitmap images that you need to include, such as backgrounds or scanned storyboards.

The supported image formats include: *.bmp, *.jpg, *.omf, *.opt, *.pal, *.png, *.psd, *.scan, *.sgi, *.tga, *.tif, *.tvg, and *.yuv.

To import images as scenes:

1. Select **File > Import > Images as Scenes**.

The Choose Image Files browser opens.

2. Browse to the desired images, select one or more images, and click **Open**.

The images are imported and a new scene is created for one.
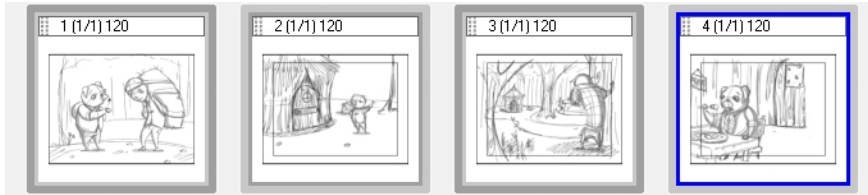
> **NOTE:** By default, when importing images in Storyboard Pro, the images are vectorized in colour and imported in vector layers. You can have access to more vectorization options by enabling the Display Vectorize Options Dialog preferences. Refer to Importing Images as Layers to learn more.

Automatic Insertion

When using the Import Images as Scenes function, you can save a little time by using the following naming convention for your bitmap images when you scan. Having your bitmap images named in the following manner, will allow acts, scenes, panels and layers to be created upon import into Storyboard Pro.

To use Automatic Insertion:

1. When scanning your images, name them according to the following example:

   `<name>-A#-S#-E#-P#-L<layer name>.<extension>`

   ‣ **Name:** This is the name of the project. This string will not be inserted into the Storyboard Pro project, but it is mandatory.

   ‣ **A:** Indicates the act the image will be placed in. Replace the **#** with the number of the act.

   ‣ **S:** Indicates the first (or only) scene the image will be placed in. Replace the **#** with the number of the first scene this image will be used in.

   ‣ **E**: (Optional attribute) Use this attribute along with the **s** attribute if you want the image to be included in multiple scenes. Replace the **#** with the number of the last scene this image will be used in.

   ‣ **P**: (Optional attribute) This attribute is to indicate which panel the image will be placed in. Replace the **#** with the number of the panel in the scene.

   ‣ **L:** (Optional string) This string is to indicate the name of the layer where the image will be placed. Replace the **#** with the number of the layer in the scene.

2. Select **File> Import >Images as Scenes**, and browse to the location on your computer where your images are saved.

The following are two examples of how the Automatic Insertion could be used:

To use the Automatic Insertion:

1. The drawings are scanned and named as such:

    ‣ LittlePigs-A1-S1-P1-LBackground.jpeg

    ‣ LittlePigs-A1-S1-P2-LBackground.jpeg

    ‣ LittlePigs-A1-S1-P3-LBackground.jpeg

    ‣ LittlePigs-A1-S2-P1-LBackground.jpeg

2. Then, imported using the **File > Import > Images as Scenes** command, they are imported in the following order in the Storyboard Pro project:
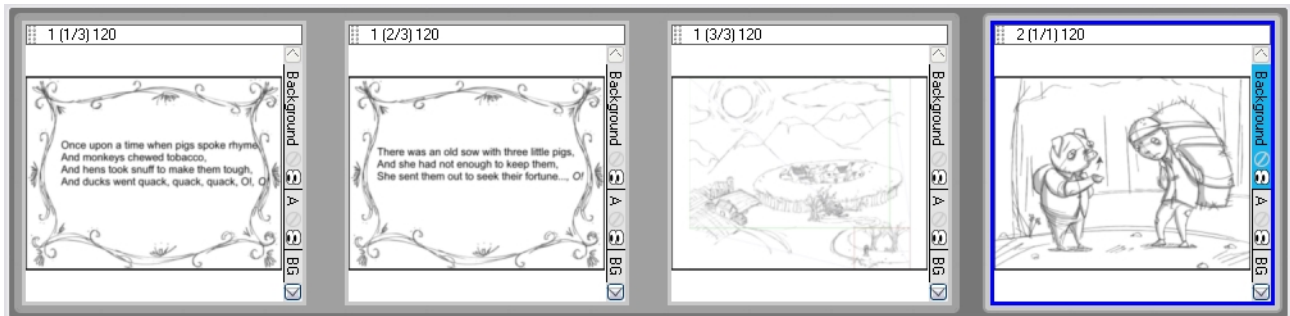
To use the Automatic Insertion using the E parameter:

1. A drawing is scanned and named like this: LittlePigs-A1-S5-E7-P1-LBackground.jpeg

2. Then, imported using the **File > Import > Images as Scenes** command, the image is placed in act 1, in scenes 5 through 7, on panel 1 on a layer called Background:

Deleting Scenes

If you have one or more scenes that you need to remove, you can easily do so.

To delete one scene:

1. In the Thumbnails view, select a scene to delete. If it is composed of more than one panels, select them all. You can also click on the minus sign in the top-left corner of the scene to collapse the scene as one panel and select it all as once.
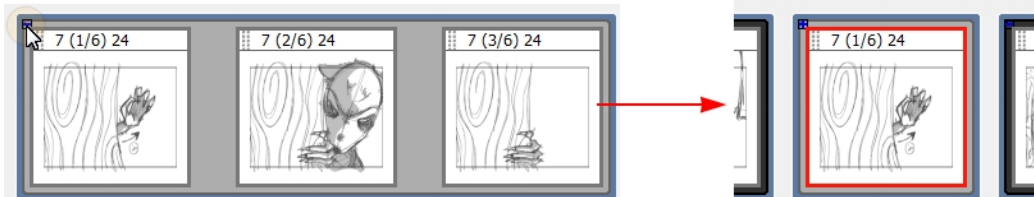
2. Select **Edit > Delete Selected Panels/Transitions** or press [Delete].

The selected scene is deleted from your storyboard.

NOTE:
When a scene is deleted, or a new scene is inserted between two existing scenes, the numbering of the scenes will be out of order. By default, there is no automatic renaming of scenes. You can change this in the Preferences dialog box–see *Preferences* on page 142and *Renaming Scenes* on page 119.

Renaming Scenes

When you start moving scenes and panels around, the Rename Scene dialog box automatically opens and prompts you to rename every time. You can also rename selected scenes as needed, using the Rename Scene command or the Panel view.

- *Renaming Scenes Using the Rename Scene Command* on page 119

- *Renaming a Scene Using the Panel view* on page 120
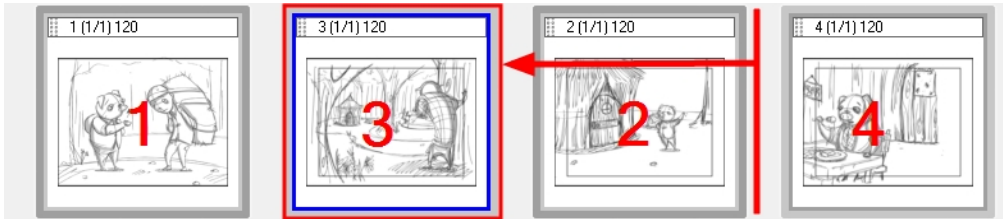
Renaming Scenes Using the Rename Scene Command

This command lets you rename a selected scene, as well as all the other scenes following it to make sure they are in order.

To rename scenes with the Rename Scene command:

1. In the Thumbnails view, select a scene to rename.

2. Select **Storyboard > Rename Scene**.

   The Rename Scene dialog box opens.
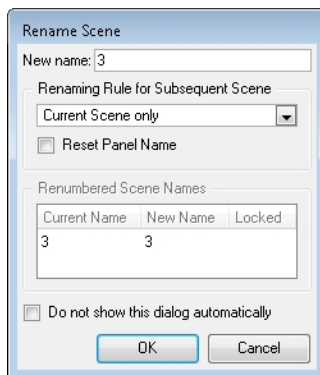
3. In the New name field, type the new name for the selected scene. You can type either a number or a name.

4. You can use the Renaming Rule for Subsequent Scene menu and determine if the next scenes should be renamed. The Renumbered Scene Names section displays the current and new names for all the scenes that will be affected by the renaming process.

   ▸ **Current Scene Only:** Renames only the selected scene.

   ▸ **Renumber Scenes:** Renumbers the current scene, as well as all the scenes that follow.

   ▸ **Renumber Selected Scenes:** Renumbers the first selected scene of a multiselection, as well as all the following scenes that are part of the multiselection.

   ▸ **Renumber Prefix Only:** Renumbers the scenes numerical prefixes beginning at the selected scene. The new name must be a numerical value.

▸ **Renumber Subsequent Scenes in Current Sequence:** Renames the selected scene, as well as all subsequent scenes in the same sequence.

▸ **Renumber All Scenes in Current Sequence:** Renames all the scenes contained in the selected sequence.

5. Select the **Reset Panel Name** option to reset all panel names according to the current panel time automatic increment rule–see *Preferences* on page 142 section to learn how to define the auto-increment rule.

6. Select the **Do not show this dialog automatically** option to prevent it from automatically opening every time you move scenes around–see *Show Rename Dialog Automatically* on page 144

Renaming a Scene Using the Panel view

You can rename scenes one at a time using the Panel view.

To rename a scene using the Panel view:

1. In the Thumbnails view, select a scene to rename.

2. In the Panel view, type the new name or number for your scene in the Scene field.
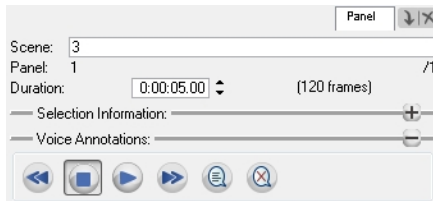
3. Press [Enter} to validate.

A warning message appears if the name is invalid or already used by another scene. If this happens, it is recommended to use the rename command and rename all subsequent scenes.

Locking and Unlocking Sequence, Scene and Panel Names

It is possible to lock sequence, scene and panel names to prevent any unwanted modification.

- Locking Scene and Panel Names
- Unlock Sequence, Scene and Panel Names

Locking Scene and Panel Names

To lock scene and panel names:

1. Select **Storyboard > Lock Sequence, Scene and Panel Names**.

   The Scene and Panel fields become deactivated.
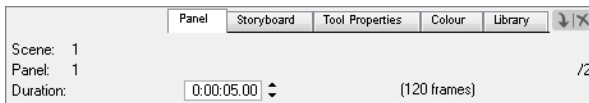
   The Thumbnail view displays a locked icon in the header.
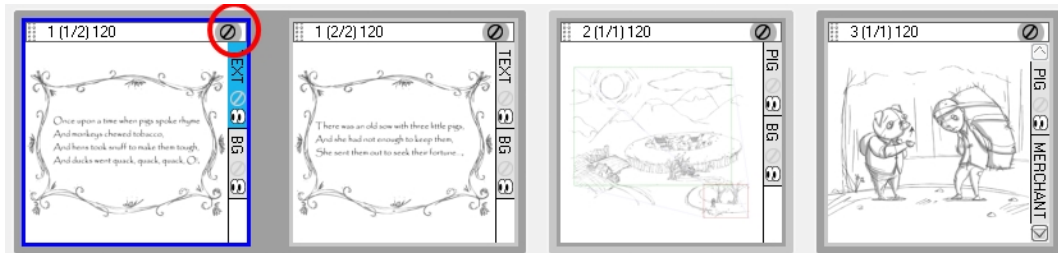
Unlocking Scene and Panel Names

To unlock scene and panel names:

1. Select **Storyboard > Unlock Sequence, Scene and Panel Names** .

   The names are unlocked and can be edited if necessary.

NOTE: To type custom panel names, you must enable the Allow Custom Panel Names preferences–see *Renaming Panels* on page 126

Splitting or Breaking the Current Scene

Using Storyboard Pro, you can split the current scene in two or break it into three parts. By default, the preferences are set so that the Split Current Scene command divides the scene before the current panel. You can change this so that the same command breaks the scene into three parts by isolating the selected panel.

To split the current scene:

1. In the Thumbnails view, select a scene to split. The current scene must contain two or more panels. The split will occur before the current panel.
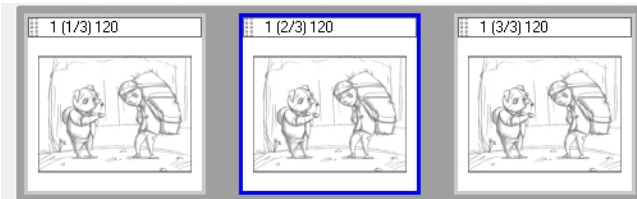
2. Select **Storyboard > Split Current Scene**.

   The scene is split into two scenes.

To break the current scene:

1. In the Preferences dialox box, select the General tab, and then select the **Break Scene when performing the "Split Current Scene" command** option.
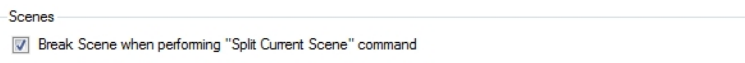
2. In the Thumbnails view, select a scene to break. The current scene must contain two or more panels.
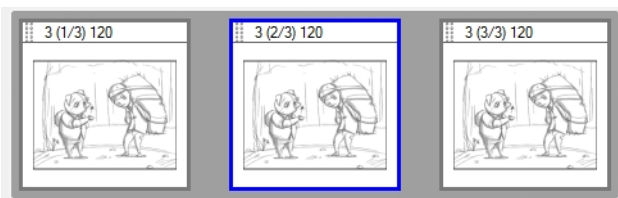
3. Select **Storyboard > Split Current Scene**.

The scene is divided in three.
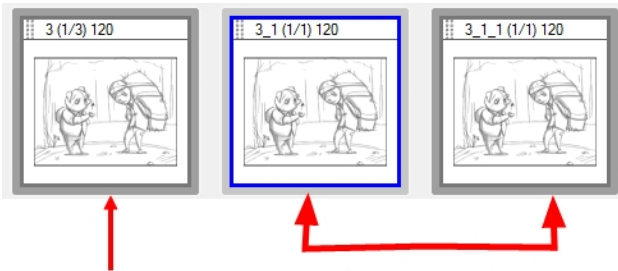
Example: The same scene after diviting into two scenes,
one has a single panel, the other scene has two panels.

Panels

Your scenes should comprise as many panels as needed to show the actions taking place. With Storyboard Pro, you can easily create different panels for your project.

By default, you can find this information on the top of each panel:

1. Scene number.
2. Panel number/Total number of panels in the scene.
3. Duration of the panel in frames.

This section includes the following topics:

Creating Panels

When you are creating a panel, the new panel is added after the current panel.

To create panels:

1. In the Thumbnails view, select the panel to which you want to add a panel.

2. Do one of the following:

   ‣ In the Storyboard toolbar, click the Create Panel button.

   ‣ Select **Storyboard > Create Panel.**

   ‣ Press [P].

   A new panel is added to the storyboard, and is part of the same scene as the current panel.

Create Panel Before

You can also create a new panel before the current panel.

To create a panel before:

1. In the Thumbnails view, select a panel.
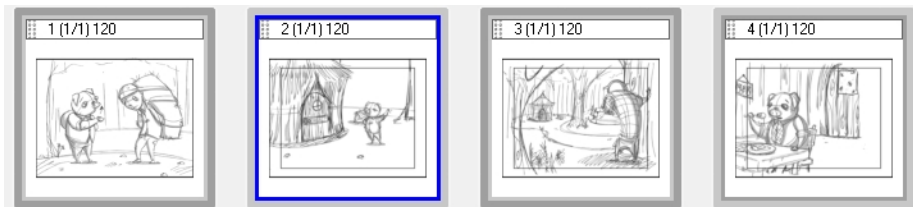
2. Select **Storyboard > Create Panel Before**.

   A new panel is added before the current panel and inside the same scene.

Smart Add Panel

You can create a new panel that contains elements from another panel.

To smart add a panel:

1. In the Thumbnails view, select the panel that contains the elements you want to be duplicated into your new panel.
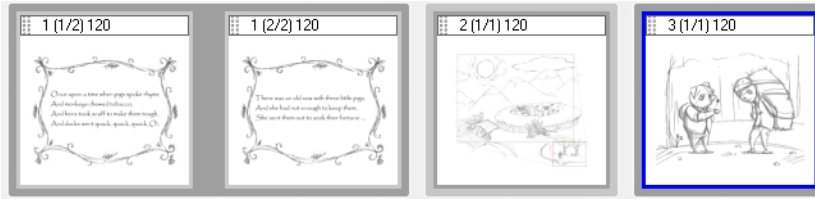
2. In the Storyboard toolbar, click the Smart Add Panel [icon] button or select **Storyboard > Smart Add Panel**.

   The Smart Add Panel dialog box opens.

3. Select the layers that contain material you want to copy into the new panel.

4. Select the **Add default layer if missing** option to create the default layers of the new panel if they are not part of the Smart Add Panel selection list.

   A new panel is created next to the selected panel. All layers are copied into the new panel, but only the layers you chose contain artwork.

Renaming Panels

By default, the rename panels option is locked. You must unlock this option in the Preferences dialog box before you can rename panels.

To enable the Allow Custom Panel Name preferences:

1. Open the Preferences dialog box:

   ‣ Select **Edit > Preferences** (Windows) or **Storyboard Pro > Preferences** (Mac OS X).
   ‣ Press [Ctrl] + [U] (Windows) or [⌘] + [,] (Mac OS X).

2. In the Preferences dialog box, select the **Naming** tab.

3. In the Panel section, select the **Allow Custom Panel Names** option.

   The Panel field in the Panel view can be now edited.
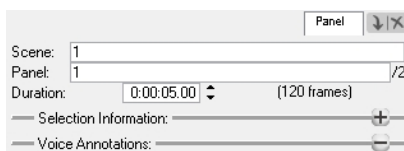
Renaming Panels Using the Panel View

You can rename one panel at a time using the Panel view—*Panel Information* on page 100

To rename a panel from the Panel view:

1. In the Thumbnails view, select the panel you want to rename.

2. In the Panel view, type a new name in the Panel field and press [Enter}.
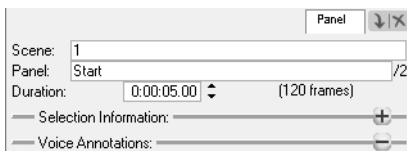
    The panel is renamed.

Renaming Panels Using the Rename Panels Command

You can rename one or more panels simultaneously using the Rename Panel command.

To rename panels using the Rename Panels command:

1. In the Thumbnails view, select the panel you want to rename.

2. Select **Storyboard > Rename Panel**.

    The Rename Panel dialog box opens.

3. Type a new name in the New name field.

4. You can use the Renaming Rule for Subsequent Panel menu to determine if the next scenes should be renamed:

    ‣ **Current Panel Only:** Renames only the selected panel.

    ‣ **Renumber Panels:** Renumbers the current panel, as well as all panels that follow.

▸ **Renumber Selected Panels:** Renumbers the first selected panel of a multiselection, as well as all following panels that are part of the multiselection.

▸ **Renumber Prefix Only:** Renumbers the panels' numerical prefixes beginning at the selected scene. The new name must be a numerical value.

The Renumbered Panel Name**s** section displays a list of the panels that will be renamed, their old names and the new names.
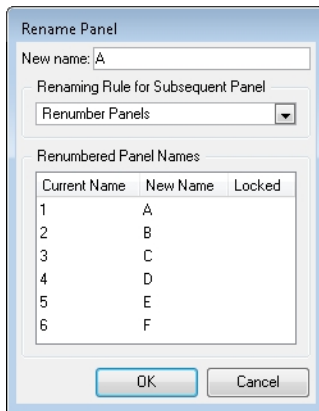
Locking and Unlocking Sequence, Scene and Panel Names

It is possible to lock sequence, scene and panel names to prevent any unwanted modification.

Locking Sequence, Scene and Panel Names

To lock sequence, scene and panel names:

1. Select **Storyboard > Lock Sequence, Scene and Panel Names**.

   ▸ The Sequence, Scene and Panel fields become deactivated.
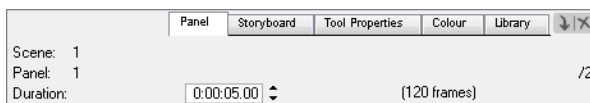
The Thumbnail view displays a Locked icon in the header.
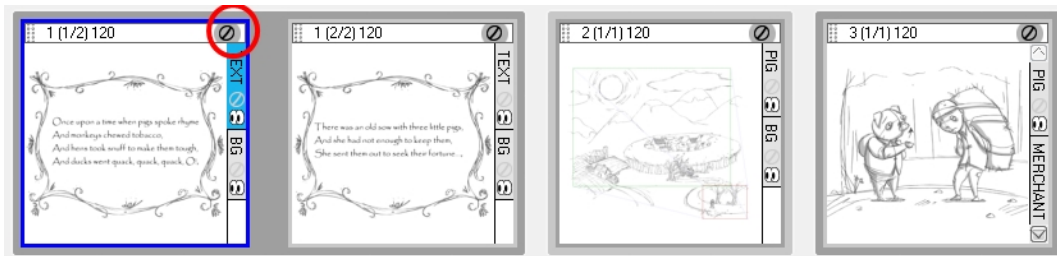
Unlock Sequence, Scene and Panel Names

To unlock sequence, scene, and panel names:

‣ Select **Storyboard > Unlock Sequence, Scene and Panel Names**.

The names are unlocked and can be edited if necessary.

Deleting Panels

Once you start adding panels, you can also delete some. Note that it is impossible to have an empty project, there is a minimum of one panel.

To delete panels:

1. In the Thumbnails view, select one or more panels to delete.
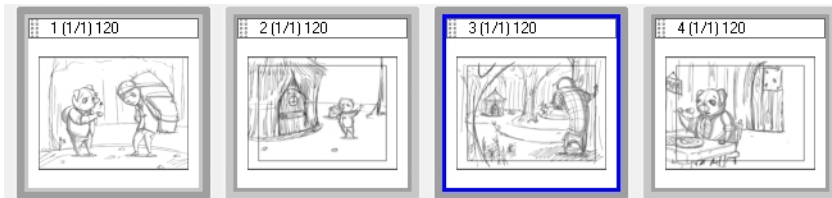
2. In the Storyboard toolbar, click the Delete Selected Panels ![icon] button. You can also select **Edit > Delete Selected Panels/Transitions** from the top menu or press [Delete].

The selected panels are deleted from your storyboard.

Duplicating Panels

You can duplicate panels when you need to create an exact copy of an already existing one.

To duplicate panels:

1. In the Thumbnails view, select the panel or range of panels to duplicate.
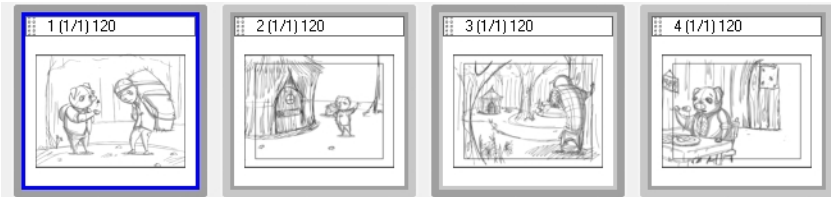
2. In the Storyboard toolbar, click the Duplicate Selected Panels ⬚ button or select **Storyboard > Duplicate Selected Panels**.

   The duplicated panels are added at the end of the current scene. If the selection included panels from different scenes, new scenes are created for them.
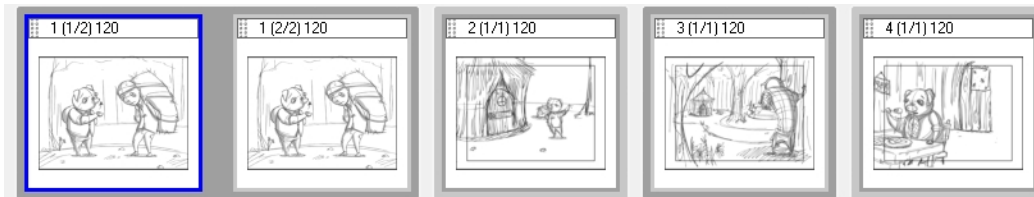
Moving Panels Around

You can easily move panels around in the Thumbnails and Timeline views using drag and drop. You can use drag and drop to reorder, separate or join selected panels. Joining selected panels will make them part of the same scene.

- *Selecting Panels* on page 130
- *Reordering Panels in the Thumbnails view* on page 131
- *Joining Panels* on page 132
- *Reordering Panels in the Timeline view* on page 132
- *Joining Selected Panels Using the Top Menu* on page 132

Selecting Panels

To drag and drop panels:

1. In the Thumbnails or Timeline view, select one or more panels to move around.
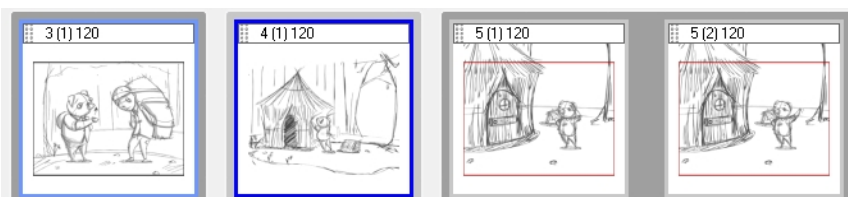
2. Click the header of the current panel and drag it to the new location.

▸ When you move your cursor around, a smaller version of the first selected panel with a number in it. The number represents how many panels are selected and being moved around.

▸ In the Thumbnails view, a straight blue line or a blue bracket represents what the movement will do.

▸ In the Timeline view, a green bracket or a green shape represents what the movement will do.

Reordering Panels in the Thumbnails view

To reorder panels, drag and drop your selection where you see a blue straight line. You can drop your selection between two scenes or in the middle of a scene. Dropping a panel in the middle of a scene will include it in the scene; it will not split it.

Remember that if you select more than one panel to move, you must drag them by clicking the current panel in the selection. Clicking any other panel in the selection will deselect the rest.

You can drag and drop a selection to remove it from a scene. Just drag the selection out and drop it between two scenes when you see a straight blue line appear.
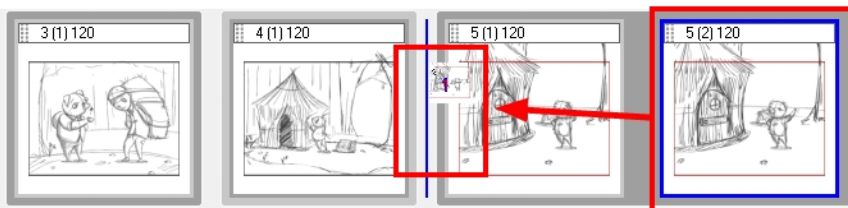
Joining Panels

You can drag and drop a selection so it joins another scene. Just drag the panel onto the edge of the scene you want it to attach to, and drop it when you see a right-facing or left-facing bracket appear.
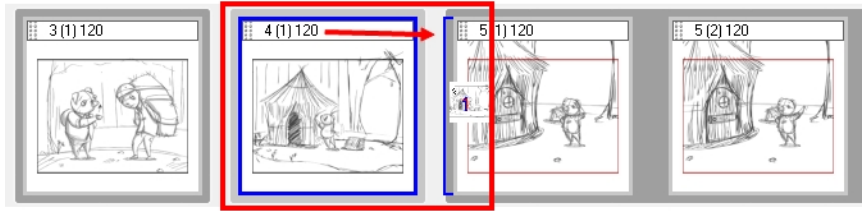
Reordering Panels in the Timeline view

To reorder panels in the Timeline view, drag and drop your selection when you see a green bracket or a green shape. You can drop your selection between two scenes or in the middle of a scene. Dropping a panel in the middle of a scene will include it in the scene, it will not split it. Remember that if you select more than one panel to move, you must drag them by clicking on the current panel in the selection. Clicking any other panels in the selection will deselect the rest.
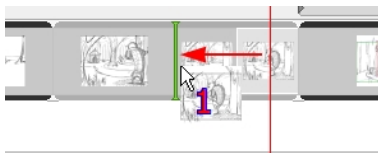
You can drag and drop a selection to remove it from a scene. Just drag the selection out and drop it between two scenes when you see a green rounded rectangle shape appearing.
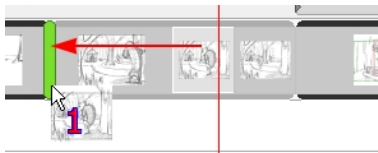
Joining Selected Panels Using the Top Menu

You can also use the top menu to join panels together.

To join selected panels:

1. In the Thumbnails view, select two or more panels that are not part of the same scene.

2. Select **Storyboard > Join Selected Panels**.

The selected panels are joined in the same scene.
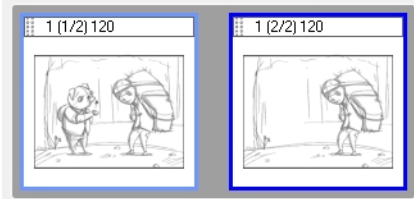
Marking Panels with Custom Colours

It is possible to mark panels with a custom colour to manage them and to quickly be able to identify them. This option is also available for audio clips--refer to *Sound* on page 385 to learn more about audio.

To mark a sound clip with colour:

1. In the Timeline view, select the panel you want to mark with colour. You can also make a multiple selection.

2. Right-click on your selection and select one of the following option: **Set Colour > Red**, **Orange**, **Yellow**, **Green**, **Blue**, **Purple** or **Custom**. Choosing custom, will open a Colour Picker dialog box, in which you can select the colour of your choice.

The selected panel will change to the colour you have chosen.

To reset the panel colour:

1. In the Timeline view, select the panel you want to reset the colour to default. You can also make a multiple

selection.

2. Right-click on your selection and select **Set Colour > Default Colour**.

The selected panel colour will reset to the default colour.

NOTE: The default colour of panels is grey. However, you can change this value from the Preferences panel--refer to *Preferences* on page 85, in the *Discovering the Interface* chapter to learn how.

Sequences
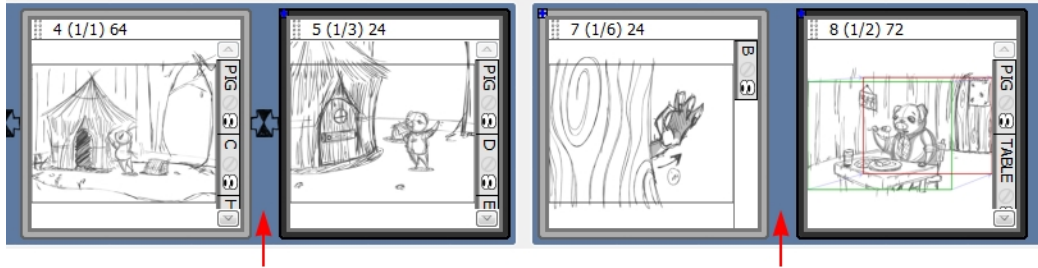
Sequences are displayed as blue rectangles in the Thumbnails view and blue bars at the top of the Timeline view.
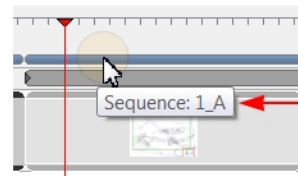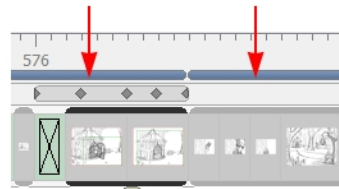
In the Timeline view, leaving the cursor on the blue sequence marker will show the sequence's name as a tooltip.

A sequence is a particular section of the story composed by one or several scenes that has a unity in either time or its location. Scenes that are contained in different sequences can have the same name. Like scenes, panels, and acts, you can manipulate the sequences of your story while you are building your storyboard.

This section contains the following information:

- *Creating a Sequence* on page 135
- *Creating Sequences Automatically* on page 136
- *Selecting All Panels in a Sequence* on page 136
- *Renaming a Sequence* on page 136
- *Joining Selected Sequences* on page 138
- *Splitting the Current Sequence* on page 138
- *Removing All Sequences from Project* on page 138

Creating a Sequence

By default, when you start building your storyboard using the New Scene button or command, the scenes that are created are not part of a sequence. If you want to start adding sequences to your project, you must use the New Sequence button for every new scene beginning a new sequence. This will add a new scene to your project and show the sequence markers in the Thumbnails and Timeline views.

You can also start adding sequences to your project at anytime, using the New Sequence from Selection command, and manipulate them using the different commands in the following topics.

> **NOTE:** When you add a new scene using the New Sequence button or command for the first time in your project, all scenes that are prior to it will be combined as a sequence. For this reason, you should use New Sequence button when starting the first scene of your second sequence.

To create a new sequence:

▸ In the Storyboard toolbar, click the New Sequence 🗋 button or select **Storyboard > New > New Sequence**.
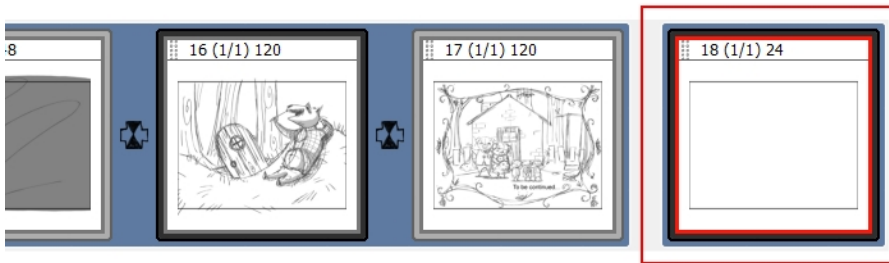
A new scene is added to your project and is now the starting point of a new sequence. If this is the first sequence you add to a project, all scenes prior to it will be combined as a sequence as well. The sequence markers will also become visible in both the Thumbnails and Timeline views.

To create a new sequence from a selection:

1. In the Thumbnails or Timeline view, select one or many scenes to combine as a sequence.
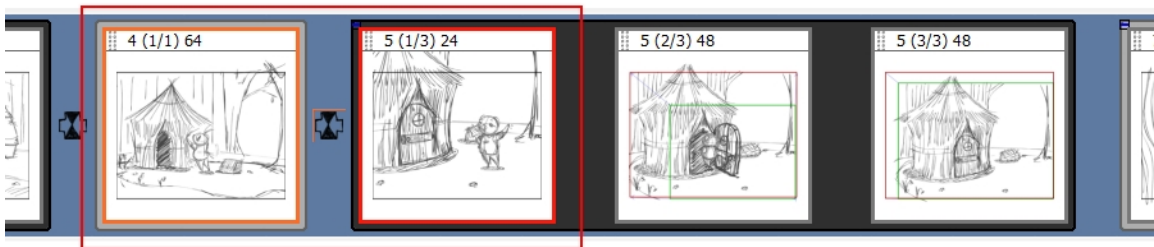
3. Select **Storyboard > New > New Sequence from Selection**.

Your selection becomes a new sequence. If this is the first sequence you add to your project, all scenes that are prior or next to it will be combined as sequences as well and the sequence markers will become visible in both the Thumbnails or Timeline views. If your selection was part of an already existing sequence, it will be split accordingly.
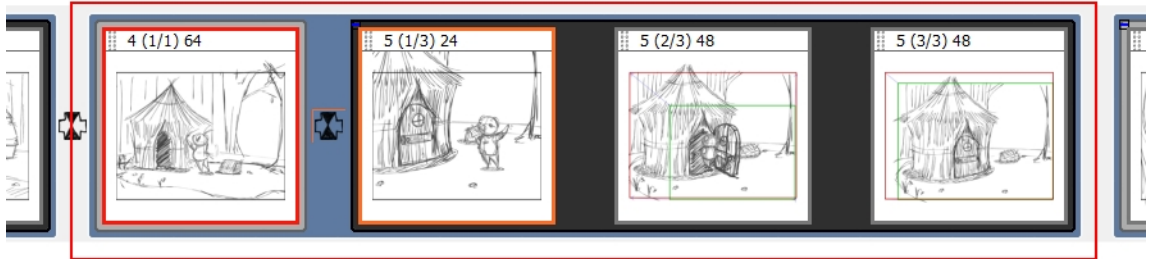
> **NOTE:** A single scene cannot be split into two or more different sequences, unless you split the scene prior to the operation.

Creating Sequences Automatically

By default, new storyboard projects are created without sequence. You can change this, so that new projects are automatically created with a sequence.

To enable the Automatically Create New Sequence preference:

1. Open the Preferences dialog box by doing one of the following:

   ▸ Select **Edit > Preferences** (Windows) or **Storyboard Pro > Preferences** (Mac OS X).

   ▸ Press [Ctrl] + [U] (Windows) or [⌘] + [,] (Mac OS X).

2. In the Preferences panel, click the **General** tab.

3. In the General section, select the **Automatically Create New Sequence** option.

Selecting All Panels in a Sequence

You can select all the panels of a sequence at once, using the Select All Panels in Sequence command.

To select all the panels of a sequence:

1. In the Thumbnails or Timeline view, select a panel in the sequence you want to select all panels from.

2. Select **Edit > Select All Panels in Sequence**.

Renaming a Sequence

Once you start adding sequences to your project, the Sequence field will become visible in the Panel view, allowing you to view the selected sequence's name as well as editing it. You can rename a selected sequence using either the Panel view or the Rename Sequence command.

To rename a sequence using the Panel view:

1. In the Thumbnails view, select a sequence to rename.

2. In the Panel view, type the new name or number for the selected sequence in the Sequence field and press Enter/Return.
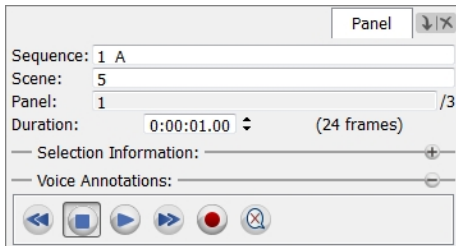
To rename sequences with the Rename Sequence command:

1. In the Thumbnails view, select a sequence to rename.

2. Select **Storyboard > Rename Sequence**.

   The Rename Sequence dialog box opens.
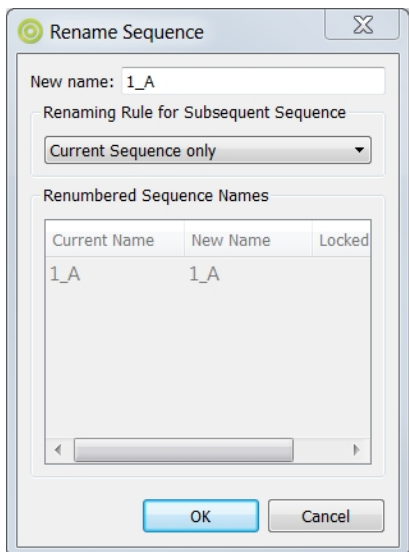
3. In the New name field, type the new name for the selected sequence. You can type either a number or a name. If you type a name or a number that is already used by another sequence, a warning message will appear.

4. You can use the **Renaming Rule for Subsequent Sequence** menu to determine how the next sequences should be renamed. The Renumbered Sequence Names section displays the current and new names for all the sequences that will be affected by the renaming process.

   ‣ **Current Sequence Only:** Renames only the selected sequence.

   ‣ **Renumber Sequences:** Renumbers the current sequence, and the ones that follow.

   ‣ **Renumber Selected Sequences:** Renumbers the first selected sequence of a multiselection, as well as all the following sequences that are part of the multiselection.

   ‣ **Renumber Prefix Only:** Renumbers renumbers the sequence numerical prefixes beginning at the selected sequence. Note that the new name must be a numerical value.

Joining Selected Sequences

Two sequences can be joined together using the Join Selected Sequences command.

To join two sequences together:

1. In the Thumbnails or Timeline view, select two consecutive sequences.
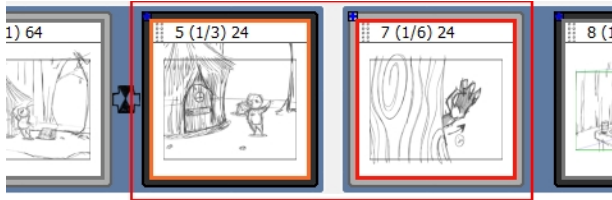
5. Select **Storyboard > Join Selected Sequences**.

   The selected sequences are joined as one.
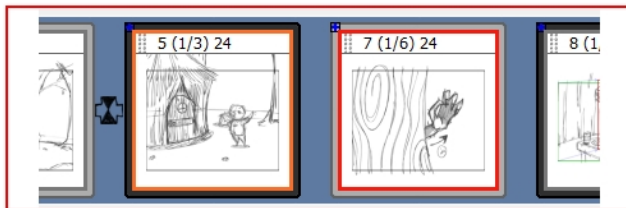
Splitting the Current Sequence

A sequence can be split in two.

To split a sequence in two:

1. In the Thumbnails or Timeline view, select the scene before the sequence to be split.

6. Select **Storyboard > Split Current Sequence**.

   The sequence is split in two and the Rename Sequence dialog box opens, prompting you to rename the second portion of the split sequence–see _Renaming a Sequence_ on page 136
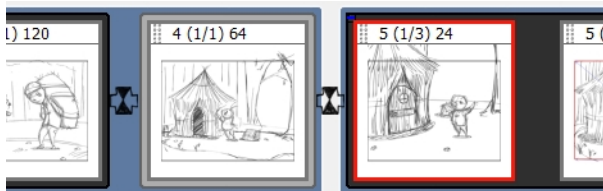
Removing All Sequences from Project

The sequences in your project can all be removed at once.

To remove all sequences:

▸ Select **Storyboard > Remove All Sequences from Project**.

This clears all sequences in your project.

Acts

An act is a particular section of the story delimited by a particular event or mood.

For example, a story could be constructed in three acts:

• Act 1: The initial situation, character introduction.

• Act 2: The journey.

• Act 3: The resolution.

Like scenes, panels and sequences, you can manipulate acts when building your storyboard. To add acts to your storyboard, you must first enable the option.

• _Enabling Acts_ on page 139

• _Starting New Acts_ on page 140

• _Joining Selected Acts_ on page 141

• _Selecting All Panels in an Act_ on page 141

Enabling Acts

By default, the acts are disabled, you need to enable them in the **Preferences** dialog box.

To enable acts:

1. Open the **Preferences** dialog box:

   ▸ Select **Edit > Preferences** (Windows) or **Storyboard Pro> Preferences** (Mac OS X).

   ▸ Press [Ctrl] + [U] (Windows) or [⌘] + [,] (Mac OS X)

2. In the Preferences panel, select the **General** tab.

3. In the General section, select the **Enable Acts** option.

   A purple flag appears at the beginning of your project, defining the start of Act 1.
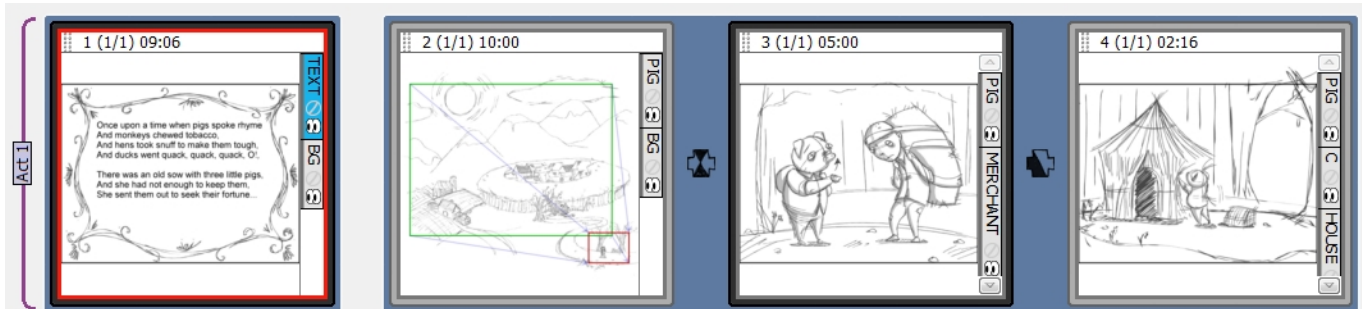
Starting New Acts

Once you have enabled acts in your storyboard project, it indicates that your storyboard is made of a single long act. You need to break it in several smaller acts. To split your project into acts, you need to define the starting panel for each act in your story.

To start new acts:

1. In the Thumbnails view, click the panel where you want to create a new act.
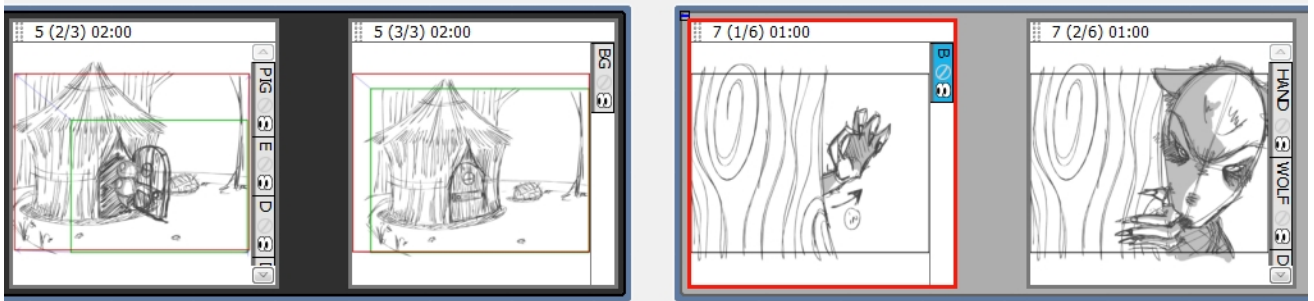
2. Do one of the following:

   ‣ Select **Storyboard > Start New Act**.
   ‣ Right-click the selected panel and select **Start New Act**.

   The act is divided in two at the point you selected.
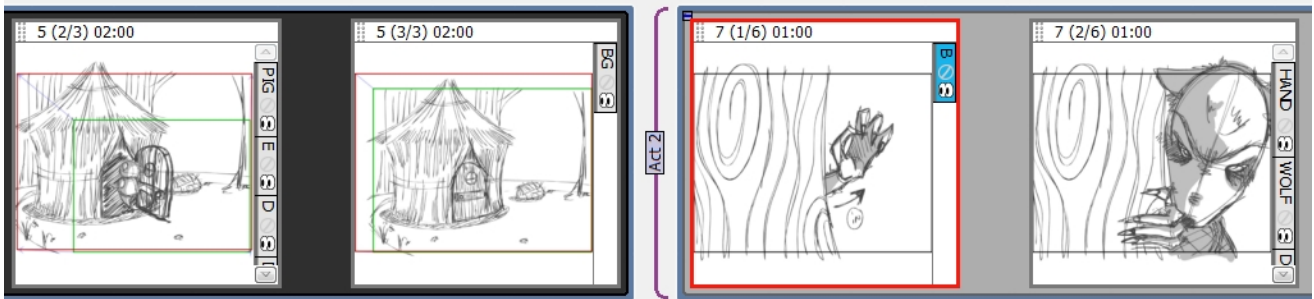
Joining Selected Acts

Once an act has been split, it is possible to join acts at any time.

To join selected acts:

1. In the Thumbnails view, select the last panel and first panel of the acts you want to join.

   You can also join more than two sections by selecting the last panel of the first section until the first panel of the last section you want to join.
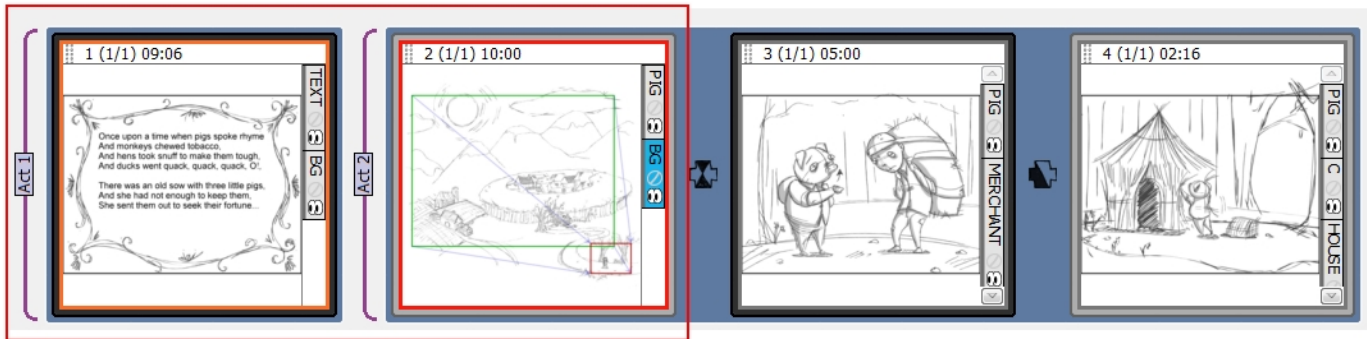
2. Do one of the following:

   ▸ Select **Storyboard > Join Selected Acts**
   ▸ Right-click the selected panel and select **Join Selected Acts**.
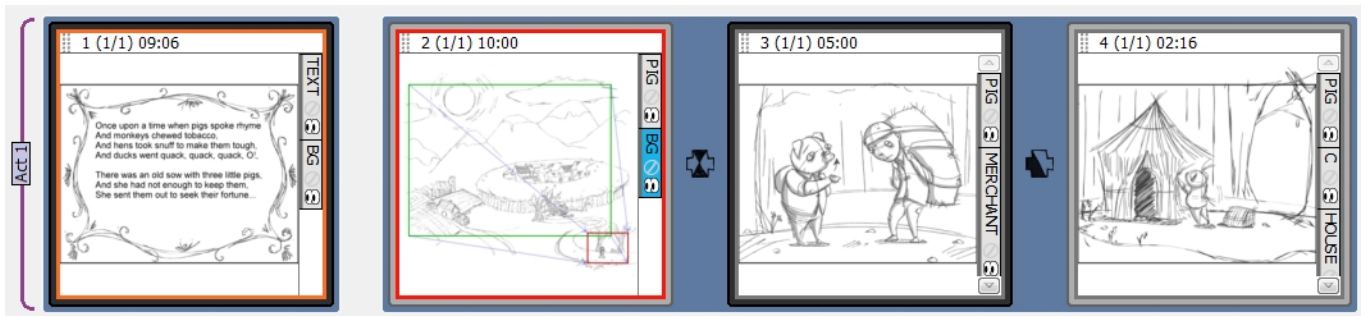
Selecting All Panels in an Act

You can select all the panels of an act simultaneously.

To select all the panels of an act:

1. In the Thumbnails or Timeline view, select a panel contained in the act in which you want to select all the panels.

2. Select **Edit > Select All Panels in Act**.

Navigation Toolbar

Storyboards can easily become very extensive projects. The Navigation toolbar is there to help you find your way through your storyboard panels and scenes. By default, the Navigation toolbar is not displayed.

To display the Navigation toolbar:

▸ Select **Windows > Toolbar > Navigation**.

The Navigation toolbar appears in a docked position at the top of the interface.

> **NOTE:** All of these commands are also available from the Play menu in the top menu.

-

Using the Navigation Toolbar

Using the Navigation toolbar is really simple, here are the different buttons and what they do.

Button	Name	Description
	First Panel	Select the first panel of the storyboard.
	Last Panel	Select the last panel of the storyboard.
	Previous Scene	Go to the previous scene.
	Next Scene	Go to the next scene.
	Previous Panel	Go to the previous panel. Press [A].
	Next Panel	Go to the next panel. Press [F].
	First Frame	Go to the beginning of the storyboard. Press [Home].
	Last Frame	Go to the end of the storyboard. Press [End].

Preferences

In Storyboard Pro, there are a series of preferences that are available to customize behaviour and help you set up an efficient workflow.

This section includes the following topics:

-
-
-

To open the Preferences dialog box:

1. Do one of the following:

   ‣ Select **Edit > Preferences** (Windows) or **Storyboard Pro > Preferences** (Mac OS X).

   ‣ Press [Ctrl] + [U] (Windows) or [⌘] + [,] (Mac OS X).

General Tab

The preferences related to script and panels editing are principally grouped under the General tab, in the General and Scenes sections.

- *Show Rename Dialog Automatically* on page 144

- *Automatically Create New Sequence* on page 144

- *Enable Acts* on page 144

- *Break Scene when Performing Split Current Scene Command* on page 144
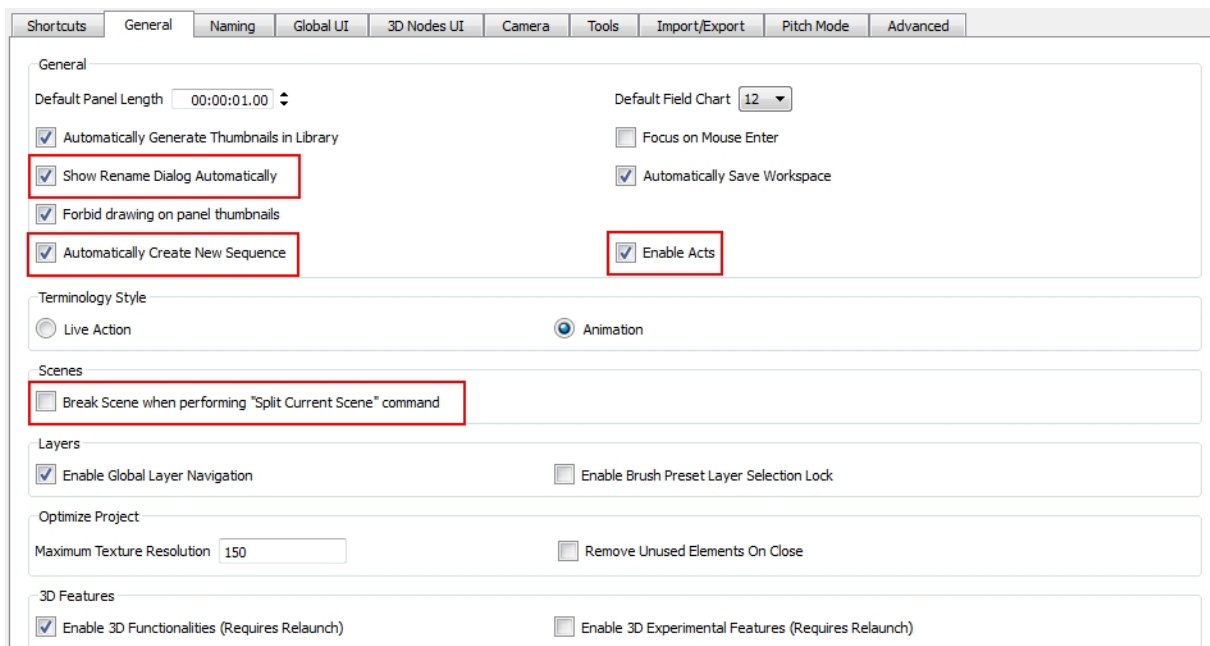
Show Rename Dialog Automatically

When you move scenes around, the Rename Scene dialog box opens prompting you to rename the scenes. This option is enabled by default. When you deselect this option, existing scenes keep their original name and new scenes are automatically named without the Rename Scene dialog box opening—see *Renaming Scenes* on page 119

Automatically Create New Sequence

By default, new storyboard projects are created without sequences. Select this option so that new projects are automatically created with a sequence—see *Sequences* on page 134*See Sequences on page 134.*

Enable Acts

In Storyboard Pro, you can organize your panels in scenes and acts. By default, acts are not available because it is not relevant to every script. If you have a story divided into acts, select this option to display and manipulate these sections—see *Acts* on page 139

Break Scene when Performing Split Current Scene Command

By default this option is disabled, this means that when using the **Storyboard > Split Current Scene** command, the current scene will be split in two before the selected panel. When enabled, the scene will be broken in three, isolating the selected panel in the middle. If you select multiple panels and use the Split Current Scene command, each selected panel will break into a separate scene—*Splitting or Breaking the Current Scene* on page 122

Naming Tab

The Naming tab contains preferences related to the naming convention and behaviour of scenes, sequences, and panels.

- *Scene Name Section* on page 145

- *Sequence Name Section* on page 146

- *Panel Section* on page 148
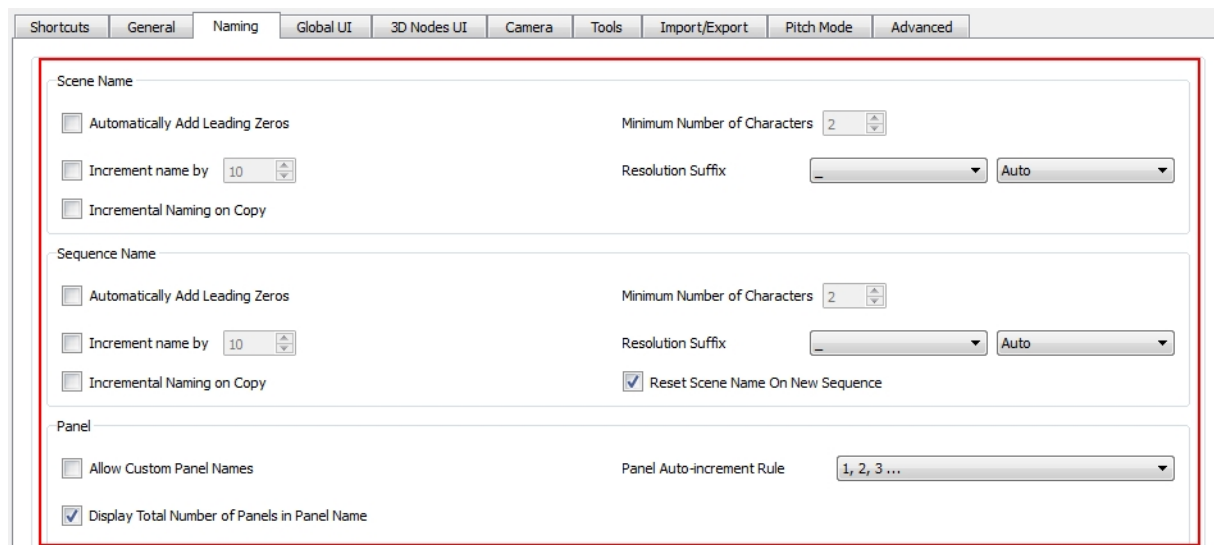
Scene Name Section

- *Automatically Add Leading Zeros* on page 145

- *Minimum Number of Characters* on page 145

- *Increment Name by* on page 145

- *Increment Naming on Copy* on page 145

- *Resolution Suffix* on page 145

Automatically Add Leading Zeros

By default, newly added scenes are named without a leading zero: 1, 2, 3, 4, 5, etc... You can change the default behaviour so that new scenes have leading zeros in their name: 01, 02, 03, 04, 05, etc... When this preference is enabled, the Minimum Number Characters option becomes available.

> **NOTE:** Enabling this preference will not add leading zeros to already existing scenes in your project.

Minimum Number of Characters

By default this preference is disabled. You must enable the Automatically Add Leading Zeros option before in the Scene Name section, because they work in tandem. This field determines the minimum number of characters the scene names will contain, using leading zeros.

- For example, the default value is "2": 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, etc...

- If you type "4": 0001, 0002, 0003, 0004, 0005, 0006, 0007, 0008, 0009, 0010, etc...

Increment Name by

When adding a new scene, the increment is 1. Select this option to choose your own increment number.

Increment Naming on Copy

When copying a scene, the copy retains the same numbering as the original, but with an added suffix. For example, a copy of scene 10 would be named 10_A. Note that if the scene is copied in a different sequence, it will be named 10.

When you select this option, the copy of the scene is named using the next available scene number, following the established increment rule. For example, the copy of scene 10, could be called scene 11.

Resolution Suffix

Use this preference to set up the suffix pattern to use when a suffix is added to a new scene when the name is already in use.

You can choose the punctuation mark preceding the suffix from the first drop-down menu:

- **None**: Suffix appears immediately following the name of the scene. For example: 12A.

- _: Suffix appears after an underscore. For example: 12_A.

- .: Suffix appears after a period. For example: 12.A.

You can choose which type of suffix to use:

- **Auto**: Uses an upper case alphabetical suffix. Once the suffix reaches Z, it will start again at A, preceeded by a number. Example: 12_A, 12_B, (...), 12_1A, 12_1B, and so on.

- **Numerical**: Uses a numerical suffix. For example: 12_1, 12_2, and so on.

- **Uppercase**: Uses an upper case alphabetical suffix. For example: 12_A, 12_B, and so on.

- **Lowercase**: Uses a lower case alphabetical suffix. For example: 12_a, 12_b, and so on.

Sequence Name Section

Automatically Add Leading Zeros

Newly added sequences are named without a leading zero: 1, 2, 3, 4, 5, and so on. Select this option so that new sequences have leading zeros in their name: 01, 02, 03, 04, 05, and so on. When this preference is enabled, the **Minimum Number Characters** option become available.

Minimum Number of Characters

By default this preference is disabled. You must enable the **Automatically Add Leading Zeros** option in the Sequence Name section, because they work in tandem. This field determines the minimum number of characters the scene names will contain, using leading zeros.

- For example, the default value is "2": 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, and so on.

- If you type "4": 0001, 0002, 0003, 0004, 0005, 0006, 0007, 0008, 0009, 0010, and so on.

Increment Name by

By default, the increment when adding a new sequence is 1, you can change this behaviour by enabling this preference and choosing the desired increment number from the **Increment Name by** field.

Increment Naming on Copy

By default, when copying a sequence, the copy will retain the same numbering as the original but with an added suffix. For example, the copy of sequence 2 would be named 2_A. You can change this behaviour by enabling the **Increment Naming on Copy** preference. Doing so, the copy of the sequence will be name using the next available sequence number, following the established increment rule. For example, the copy of sequence 2, could be called sequence 3.

Resolution Suffix

Use this preference to set up the suffix pattern to use when a suffix is added to a new sequence when the name is already in use.

You can choose the punctuation mark preceding the suffix from the first drop-down menu:

- **None**: Choose this option for the suffix to appear immediately following the name of the sequence . For example: 12A

- **_**: Choose this option for the suffix to appear after an underscore. For example: 12_A

- **.**: Choose this option for the suffix to appear after a period. For example: 12.A

You can choose which type of suffix to use:

- **Auto**: Choose this option to use an upper case alphabetical suffix. Once the suffix reaches Z, it will start again at A, preceeded by a number. Example: 12_A, 12_B, (...), 12_1A, 12_1B, etc...

- **Numerical**: Choose this option to use a numerical suffix. For example: 12_1, 12_2, etc...

- **Uppercase**: Choose this option to use an upper case alphabetical suffix. For example: 12_A, 12_B, etc...

- **Lowercase**: Choose this option to use a lower case alphabetical suffix. For example: 12_a, 12_b, etc...

Panel Section

Allow Custom Panel Names

By default, it is not possible to rename panels in Storyboard Pro, but you can change this behaviour if you need to. Once you enable this preference, the Storyboard > Rename Panel command, as well as the Panel name field in the Panel view become active—see *Renaming Panels* on page 126
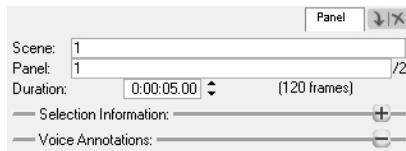
Panel Name Auto-increment Rule

By default, panel names are named numerically. Using this preference, you can select from three other alphabetical increment rules. The difference between each of them is the behaviour once you reach panel Z.
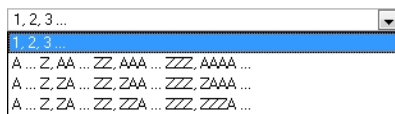
Display Total Number of Panels in Panel Name

The total number of panels is displayed with the panel name.

Import/Export Tab

You will find some more preferences related to panels and script on the Import/Export tab of the Preferences dialog box.

Auto Premultiply Imported Image by Alpha Channel

Premultiplies the channels with the alpha value of the layer, resulting in an opaque layer. This is helpful when creating layers used by other effects, or in certain compositing situations. Use this option if you are importing a semitransparent image. Deselect this option if you are importing a PSD image.

Ask before Creating Panels when Using Automatic Insertion

This preference refers to the behaviour when using Storyboard > Import Images as Scenes function. If the element you are set to create upon import does not already exist in your project, you are prompted to create the element.

Ask before Removing Existing Layer When Using Automatic Insertion

This preference refers to the behaviour when using Storyboard > Import Images as Scenes function. If the element you are set to create upon import does already exist in your project, you are prompted to remove the original element or keep it.

Chapter 5: Layers
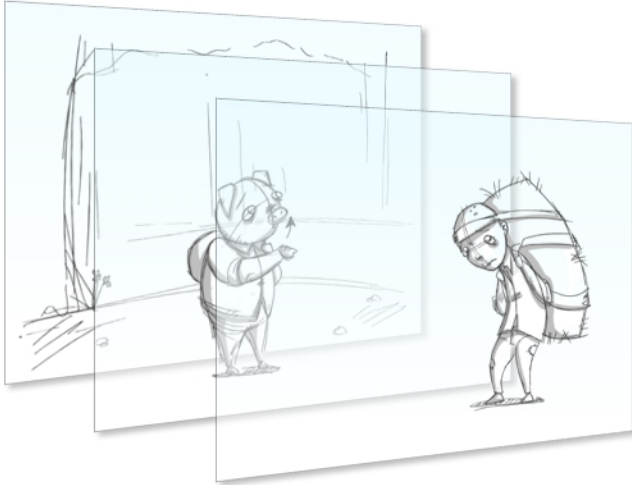
Storyboard Pro allows you to work with layers within your individual storyboard panels. Working with layers helps to keep your artwork organized and permits advanced editing of individual components.

Working on multiple layers increases the reusability of your drawings as you move from shot- to-shot or scene-to-scene. Each layer or part of a layer can be dragged from the selected shot into any other shot, reducing drawing time.

This chapter includes the following topics:

About Layers

In animation, a layer is an individual column, level, or character. The scene's layers are superposed to form the final image. When you import an image or draw in a panel, you are actually adding artwork to one of its layers. By default, each panel has two layers, a background (BG) and a foreground layer (A). As you add layers, they are automatically assigned subsequent letters in alphabetical order, but you can rename them. They are also placed on top of the selected layer or at the very top of other layers if there is no layer selected in the panel.

This section includes the following topics:

Drawing on a Layer

When you open a project, the Stage view is displayed by default in the Storyboard Pro window. In the Stage view, tabs are always displayed, allowing you to navigate between layers. If the Thumbnails view is large enough, layer tabs are displayed for each pane there as well. By default, an empty layer will have the closed eyes icon to indicate that it is empty. As soon as you draw or paste anything on an empty layer, the eyes icon will open.

Layers displayed in the Stage view

Layer tabs

Foreground layer (A)

Background layer (BG)

Layers displayed in the Thumbnails view
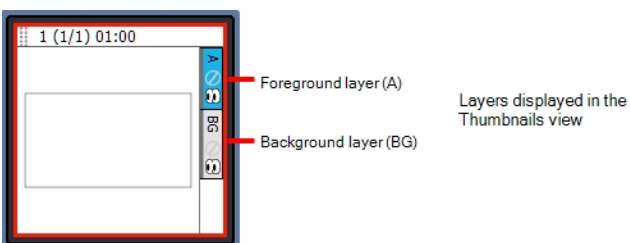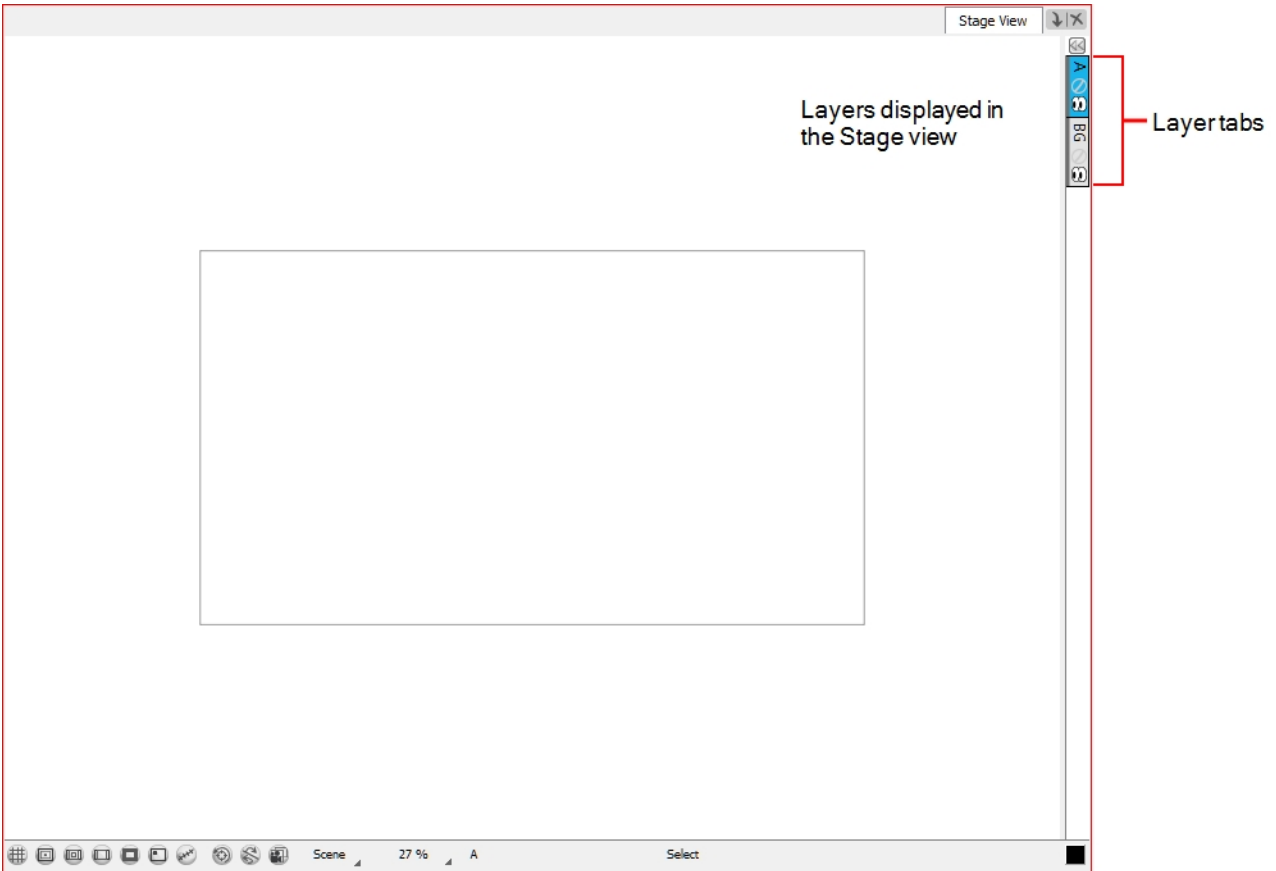
To draw on a layer:

1. Select a layer by clicking it.

    The active layer is highlighted in blue.

2. Choose a drawing tool and begin drawing in the Stage view.

Types of Layers

There are three types of layers you can use depending on the type of graphics and artwork you are aiming to achieve: bitmap, vector, and 3D.

Bitmap Layers: Allow you to create 2D graphics that are resolution independent. Bitmap graphics are made of pixels on a grid that resemble tiny dots, which altogether make up the drawing you are creating or artwork you are importing. Bitmap graphics impart a more natural and soft look to your work. The colour is defined on a pixel-by-pixel basis.

Vector Layers: Allow you to create 2D graphics that are made of many individual, scalable objects. Each object is created by a mathematical equation rather than pixels, so they always display at the highest quality. Because they are scalable, vector objects are resolution independent. You can increase and decrease the size of vector objects and your lines remain crisp and sharp, which is ideal for cartoons! On vector layers, the colour is defined for the whole stroke.

Vector objects can consist of lines, curves, and shapes that you can edit and transform using control handles. Vector graphics are not restricted to rectangular shapes like bitmap graphics. You can place vector objects over other objects, and the object below will show through.

3D Layers: Allow you to import 3D objects into layers, creating a project that mixes 2D and 3D styles—see *Adding 3D Objects to the Storyboard* on page 262.

Viewing Layers

There are several ways to display layers in Storyboard Pro: in the Stage view or Layers panel. In both, thumbnails are displayed on each layer, so you can easily identify its contents.

To view layers in the Stage view:

‣ In the Stage view, click the arrow button to expand the layer tabs.
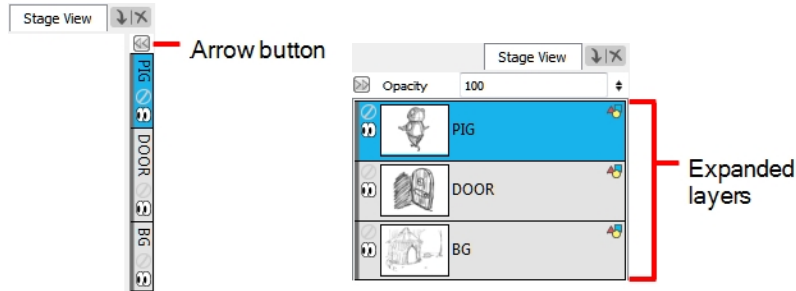
To view layers in the Layers panel:

1. Do one of the following:

‣ From the View menu, select **Layers**.

‣ From the top menu, select **Windows > Layers**.

The Layers panel displays all the layers in the selected panel.
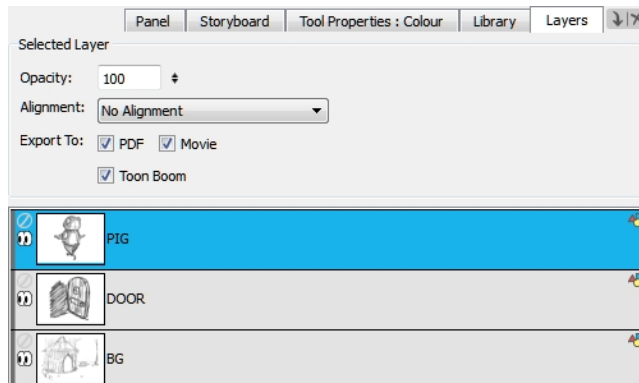
Selecting Layers

You can select any layer from the Stage view, Layers panel, or Thumbnails view. Selected layers turn blue.

To select a layer, do one of the following:

▸ **Stage view**: Click the layer tab of the layer you want to select.

▸ **Layers panel**: Click the layer you want to select.

▸ **Thumbnails view**: Click the layer tabs of the layer you want to select. Arrows above and below the layer tabs indicate additional layers.

▸ To select multiple layers, press [Ctrl] (Windows) or [⌘] (Mac OS X) and click each layer you want to select. Also, press Shift and click one layer and then another to select a sequence of layers.
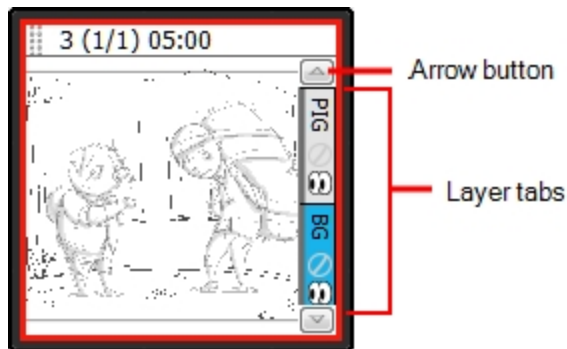
To select the next and previous layers:

1. Select a layer.

2. From the top menu, select one of the following:

   ▸ **Layer > Select Next Layer** to select the next layer up the layer stack, stopping at the top of the stack.

   ▸ **Layer > Select Previous Layer** to select the next layer down the layer stack, stopping at the bottom of the stack.

Identifying Layers

Each type of layer is indicated by a different colour and icon to help you clearly identify the type of layer you are working on. The default colours of the layers can be changed in the Global UI tab of the Preferences dialog box—see *Preferences* on page 173.

Different types of layers
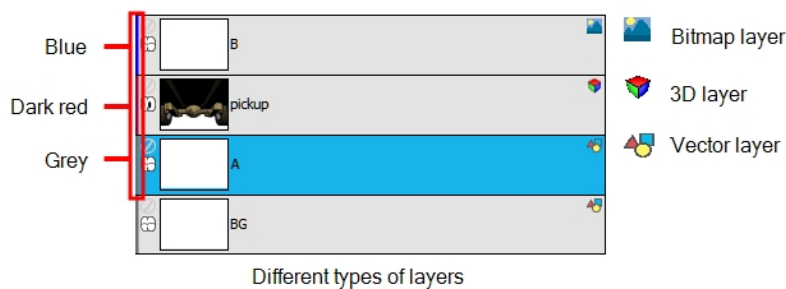
Working with Layers

There are many ways to work with layers within your storyboard project.

This section includes the following topics:

Adding Layers to a Panel

You can add an unlimited number of layers to a panel.

To add a layer to a panel:

1. From the Thumbnails view, select the panel to which you want to add a new layer.

2. Do one of the following:

   ‣ Select **Layer > New Vector Layer** or **New Bitmap Layer**.
   ‣ Click the New Vector Layer or New Bitmap Layer button in one of these areas: Layers toolbar, Stage view, or Layers panel.

> **NOTE:** For more information on working with 3D objects on layers, see *Adding 3D Objects to the Storyboard* on page 262.

Copying Layers

You can reuse drawings from other panels throughout your storyboard. You can also modify drawing objects and transformations after they have been copied to a new layer, rather than redrawing objects that are similar.

When you copy a layer, it is placed on the clipboard, so you can paste it in many different locations if needed.

To copy a layer to another panel by dragging:

1. Click the tab of the layer you want to copy. You can copy multiple layers simultaneously by holding Ctrl (Windows/Linux) or ⌘ (Mac OS X) while you make your selection.

2. Drag the selected layer to the layer section of the destination panel. Drop the layers at a specific position to place it in the desired layer order.
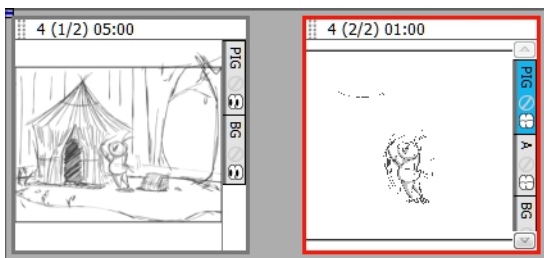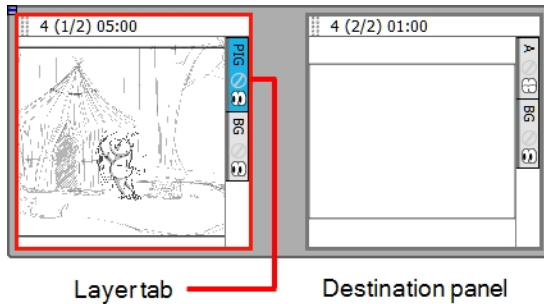
When you copy a layer, it retains its original layer name in the new panel. If a layer with the same name already exists, then you will be prompted to give it a new name or overwrite the existing layer.

For example, if layer A is copied to a panel, where a layer A already exists, the copied layer will be named A_1 by default. If it is copied into the panel a second time, the new layer will be named A_2.

To copy a layer to another panel by using copy and paste:

1. Select the layer you want to copy. You can copy multiple layers simultaneously by holding Ctrl (Windows/Linux) or ⌘ (Mac OS X) while you make your selection.

2. Do one of the following:

   ‣ Select **Layer > Copy Layers**. Select the destination panel, and from the top menu, select **Layer > Paste Layers**.

   ‣ Right-click the layer tab and select **Copy Selected Layers**. Select the destination panel, right-click the layer tab and select **Paste Layer**.

Duplicating Layers

Duplicating layers is a quick way to do a quick copy and paste in one operation. Unlike copying a layer, you cannot paste multiple copies of a layer on other panels. Duplicating layers is only available within one panel. Duplicated layers retain their names and are appended with a number.

To duplicate a layer:

1. Select a layer and do one of the following:

   ‣ Right-click the layer and select **Duplicate Selected Layer**.

   ‣ In the Stage view or Layers panel, click the Duplicate Selected Layer 🗋 button.

   ‣ Select **Layer > Duplicate Layers**.

Renaming Layers

When layers are named appropriately, you can work faster and keep track of all the layers.

To rename a layer:

1. Select the panel with the layer you want to rename.

2. Do one of the following:

   ‣ Select **Layer > RenameLayers**.

   ‣ Right-click the layer's tab and select **Rename Layer**.

   ‣ Double-click the layer tab.

3. In the Change Layer Name dialog box, type in a new name for the layer.

Deleting Layers

You can delete layers you no longer need. This keeps your project clean and tidy.

To delete a layer from a panel:

1. Select a layer.

2. Do one of the following:

   ‣ Select **Layer > DeleteLayer**.

   ‣ Right-click the layer's tab and select **Delete Layer**.

   ‣ In the Layer toolbar, click the Delete Layer 🗋 button.

   ‣ From the Layers panel, click the Delete Layer 🗋 button.

   ‣ In the Stage view, click the Delete Selected Layers ⊖ button.

Locking and Unlocking Layers

You can lock the currently selected layer to protect any objects on it from being changed. Once locked, you can unlock the layer to make changes to any objects on it.

To lock or unlock a layer:

1. Select the tab of the layer you want to lock or unlock.

2. Click the Lock icon, located directly under the layer name.
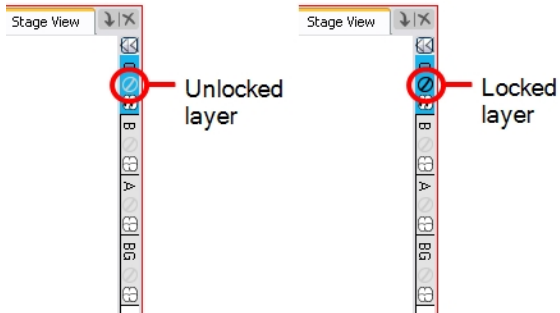
Other ways to lock or unlock a layer:

- Select **Layer > Lock/Unlock Layers**.

- In the Layer toolbar, click the **Lock/Unlock Layers** button.

- Press [Alt]+[L].

Showing and Hiding Layers

Working with many layers, it may be useful to hide certain layers.
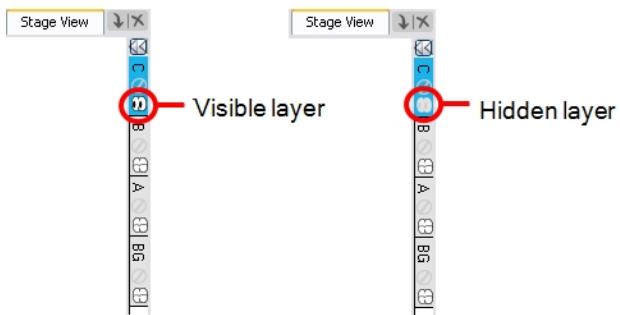
To view layers in the Stage view:

▸ In the Stage view, click the arrow button to expand the layer tabs.
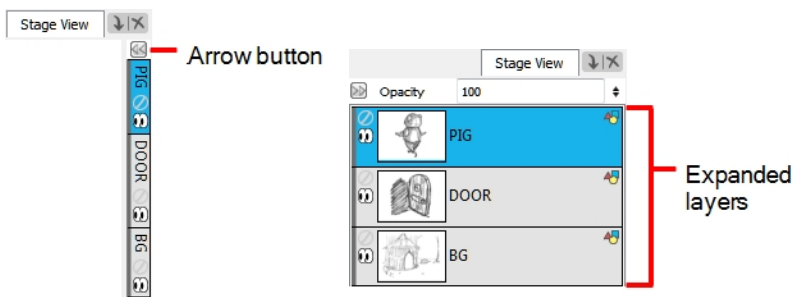
To show or hide a layer:

1. Select the tab of the layer you want to show or hide.

2. Do one of the following:

   ‣ Click the Show/Hide Layer ⬛ icon.

   ‣ Select **Layer > Show/Hide Layers**.

   ‣ Right-click the layer tab and select **Show/Hide Layers**.

> **NOTE:** When merging layers, hidden layers will be excluded and left unmerged.

Changing Layer Opacity

If necessary, you can modify the opacity of layers.

> **NOTE:** Layer transparency is not supported on Export to Toon Boom and/or FBX.

To change the layer opacity:

1. Expand the layer section by clicking the arrow button.
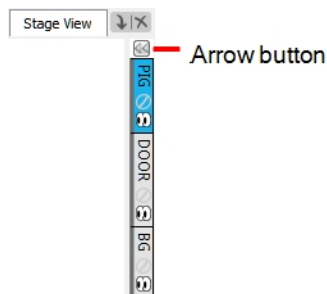
2. Select the layer whose opacity you want to modify.

3. Type in a new opacity between 0 and 100, or click in the Opacity field and use the up/down arrows on your keyboard to set the opacity.
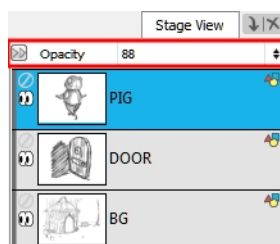
   The changes you make are reflected in the Stage view.

Other ways to modify the layer opacity:

- Right-click a layer and select **Change Layer Opacity**.

- Select **Layer > Change Layer Opacity**.

  In the Change Layer Opacity window that opens, enter a new opacity.

Arranging Layers

Layers can be rearranged. They can be brought closer to the front or the back in relation to the other layers in a panel. For example, if you want to have a character move to the front of a shot, you can move the character layer above the others. In Storyboard Pro, the layers at the top of the list are displayed above the other layers in the Stage view. The layer order will be reflected in the final export.

There are several different ways to change the order of layers in a panel. You can reorder layers by selecting a layer and dragging it to a new location, or reorder layers through the Layers menu.

To arrange a layer by dragging:

You can also change the order of layers by clicking and dragging them to a new location, above or below another layer.

1. Select a layer to move.

2. Drag the layer above or below other layers to change their display priority in the Stage view.

To arrange a layer using the Layers menu:

1. Select a layer to modify.

2. Select one of the following:

   ‣ **Layer > Arrange > Bring Layer to Front** to move the selected layer in front of all other layers in the current panel.
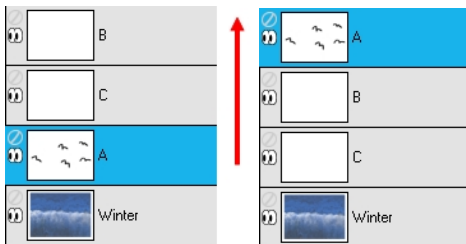
   ‣ **Layer > Arrange > Bring Layer to Forward** to move the selected layer up one spot in the current panel.
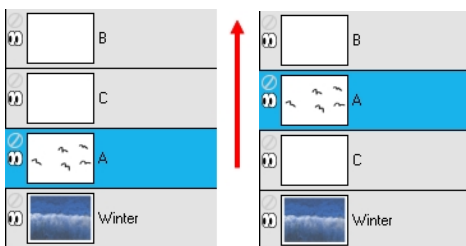
   ‣ **Layer > Arrange > Send Layer to Back** to move the selected behind all other layers in the current panel.
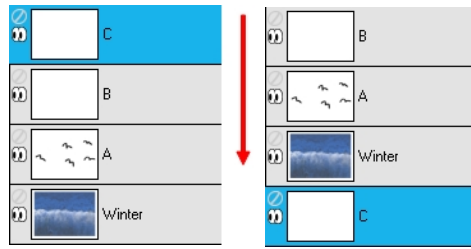
‣ **Layer > Arrange > Bring Layer Backward** to move the selected layer down one spot in the current panel.
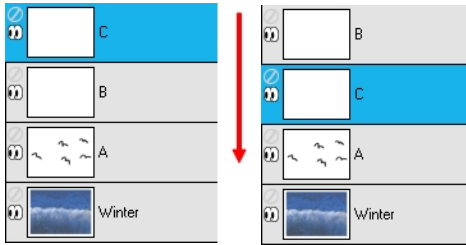
NOTE: If you changed the Z-depth, it supecedes the layer order.

Converting Layers

If you started with one type of layer, such as vector, you can always switch it to use a bitmap layer and vice versa.

NOTE: When you convert from vector to bitmap, the vector data is lost, so if you convert back to vector, what you get is a vector region with a bitmap inside of it

To convert a layer:

1. Select one or more layers to convert.

2. Do one of the following:

   ‣ Right-click the selected layer and select **Convert Vector Layer**, **Convert to Bitmap Layer** or **Convert to Drawing Layer**.

   ‣ Select **Layer > Convert Vector Layer**, **Convert to Bitmap Layer** or **Convert to Drawing Layer**.

   The layer is converted as indicated by the layer indicated colour and icon.
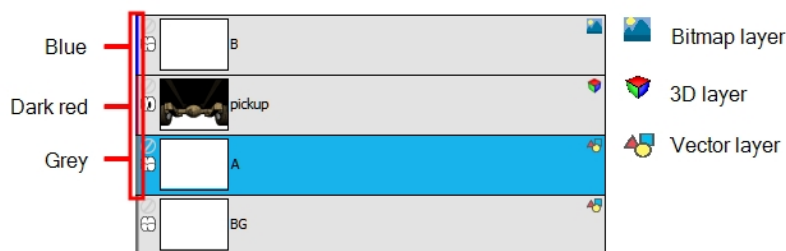
Different types of layers

Blurring Layers

If the layer you want to blur is on a vector layer, you must first convert it to a bitmap layer–see *Converting Layers* on page 163.

To blur a bitmap layer:

1. Select the layer(s) to blur.

2. Right-click the layer(s) and select **Blur Bitmap Layer**, or select **Layer > Blur Bitmap Layer** from the top menu.

   The Blur Bitmap Layer dialog box opens.

3. Enter a value from 0 to 100 to blur the contents of the layer.

Changing the Resolution of Bitmap Layers

You can change the resolution of bitmap layers to better suit the needs of your project.

To change the resolution of a bitmap layer:

1. From the Layers panel, select a bitmap layer whose resolution you want to change.

2. Right-click the layer and select **Change Bitmap Layer Resolution**, or select **Layer > Change Bitmap Layer Resolution** from the top menu.

   The Change Bitmap Layer Resolution dialog box opens. The current project resolution is displayed.
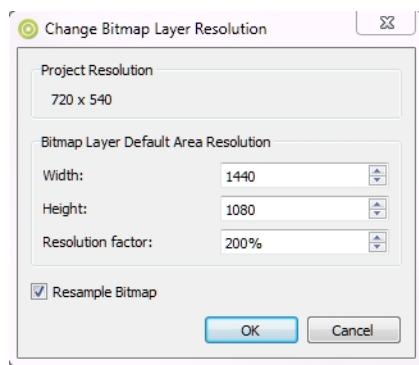
3. Adjust the **Width**, **Height**, or **Resolution Factor**. These three parameters are linked; changing one, changes the others.

4. Select the **Resample Bitmap** option to change the resolution of the bitmap layer without changing the area it covers.

NOTE: Resampling an image will degrade it to some extent. Resampling to a lower resolution makes the image blocky and jagged. Resampling to a higher resolution may blur the image.

Aligning Layers with the Camera

While working with layers, you may want to align specific layers with the camera, so that any time you adjust the camera, the layer is always in full view. You can set a different alignment for each layer. The default behaviour is that the camera is not aligned with layers.

To align a layer with the camera:

1. In the Layers panel, select a layer to align with the camera.
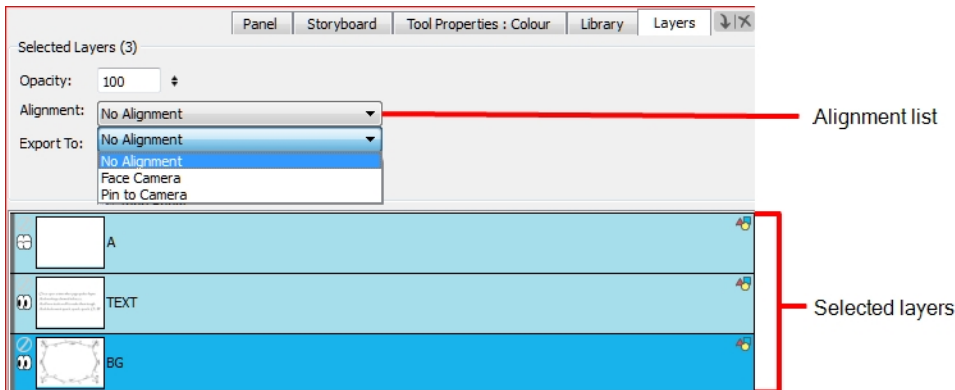
2. From the Alignment list, select one of the following:

   ‣ **No Alignment:** The layer is independent of the camera.

   ‣ **Face Camera**: The layer is oriented to face the camera, so that it rotates around its pivot point to always face the camera, but does not move with the camera.

   ‣ **Pin to Camera:** The layer is oriented to the camera's perspective. Essentially the layer always moves with the camera.

Toggling Background Layers

Sometimes it is helpful not to have onion skinning applied to certain layers while working. You can set certain layers as background elements, so they will not interfere with onion skinning.

To set a layer as a background element:

1. In the Onion Skinning toolbar, click the Onion Skinning 🦪 button.

   A Toggle Background Layer button appears on each layer.

Toggle Background Layer
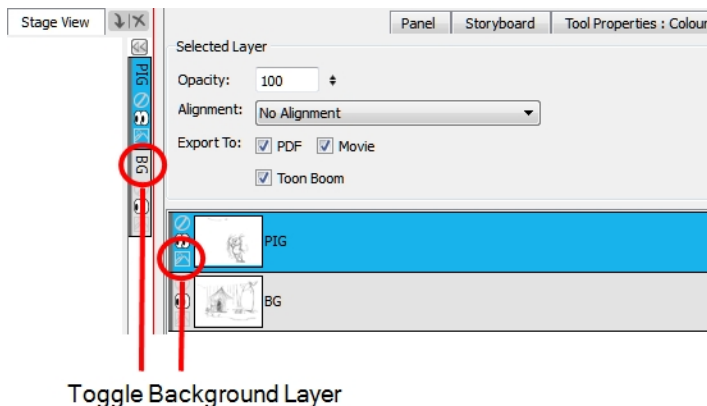
2. To set a particular layer as a background element, do one of the following:

   ‣ Click the Toggle Background Layer button.

   ‣ Select **Layer > Toggle Background Layers**.

   This layer will not have onion skinning applied to it.

3D Object Layer Display

Each 3D object consists of multiple layers, which you can display in Storyboard Pro. It contains the following layers:

- Graphics that add texture to the flat areas (Shaded).

- Flat areas to which textures will be applied (Flat).

- Boundaries that define the edges of the object (Wireframe).

Shaded	Flat	Wireframe
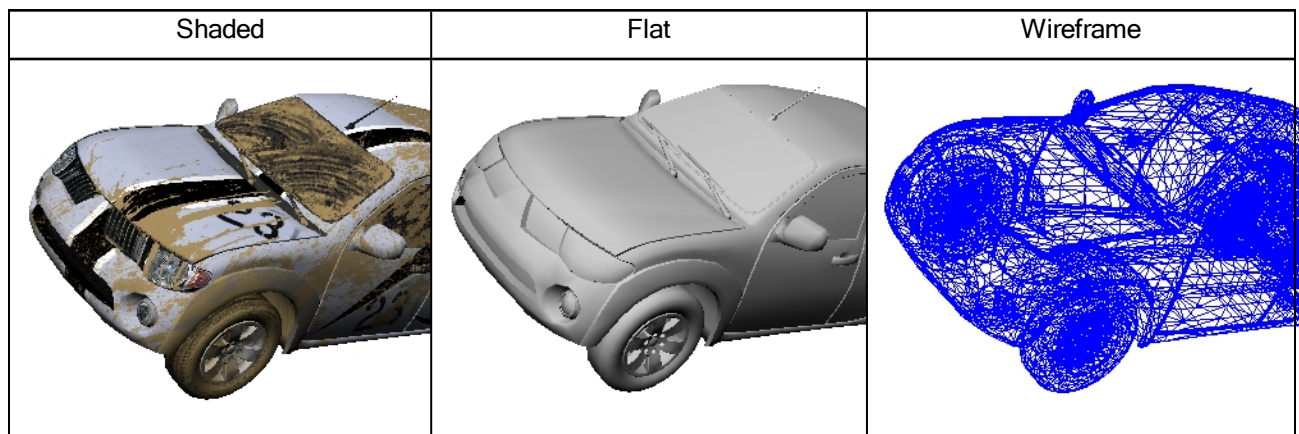
To change the display of a 3D object:

1. Open the panel that contains your 3D object.

2. Select the layer that contains your 3D object from the Stage view or Layers panel.
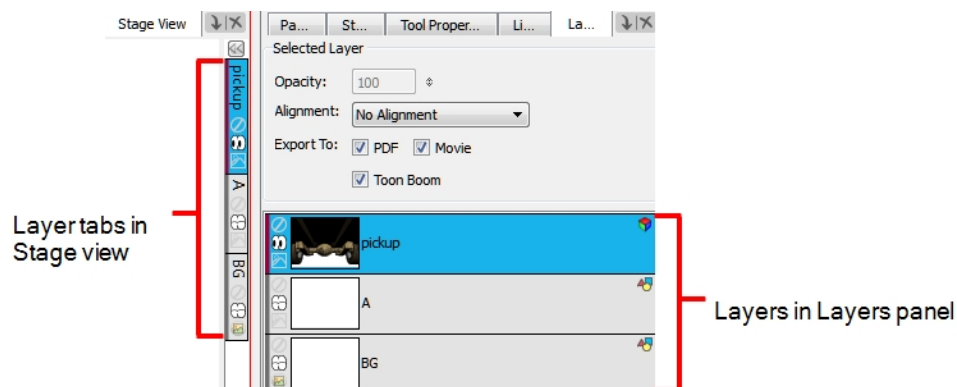
3. Right-click the layer and select one of the following:

   ‣ **Shaded**: The 3D object displays the textures that cover its wireframe.

   ‣ **Flat**: The 3D object displays the surfaces that cover its wireframe.

   ‣ **Wireframe**: The 3D object displays the lines that define the area covered by the object.

‣ **Wireframe on Shaded**: The 3D objects displays the textures with its wireframe on top.

‣ **Wireframe on Flat**: The 3D objects displays the surface with its wireframe on top.

Setting a Layer Layout as Default

Once you set up a layer layout in a panel, you can select that panel and save this layout as the default layout to use whenever a new panel is added.

To set a layer layout as the default:

‣ Select the layer to use as the template and select **Layer > Set Layers Layout as Default**.

Importing Images as Layers

As you build your scene, you may want to use bitmap images for backgrounds and overlays. You may also want to import an image as a reference for a vector drawing you want to create. With Storyboard Pro, you can import a variety of bitmap formats (TVG, OPT, PAL, SCAN, SGI, TGA, YUV, OMF, PSD, PNG, JPG, JPE or JPEG) which you can combine with your vector-animated content to create rich and unique graphic styles. You can import a single image (or multiple images located in the same folder) into a new layer.

> **IMPORTANT:** Storyboard Pro does not support import of 8-bit CMYK or 16-bit RGB or CMYK format PSD files. You can currently import only 8-bit RGBA format PSD files.

To import images into the current panel:

1. Select the panel to which you want to import the image(s).

2. Select **File > Import > Images as Layers**.

   The Choose Image Files dialog box opens.

3. Select the image to import and click **Open**.

> **NOTE:** To select multiple images, hold down [Ctrl] (Windows) or [⌘] (Mac OS X) as you click.

A layer is created in your panel, containing the imported image. If you selected more than one image, each image will be imported in alphanumerical order on its own layer.

If you selected a `*.psd` image with multiple layers, a message will appear giving you the option to import each layer separately.

‣ Click **Yes** to import each layer on its own layer in the panel.

‣ Click **No** to create a layer behind the existing layers, containing the selected `*.psd` image.

Vectorization Options

By default, when you import an image into your project using either the Import Image as Layers or Import Images as Scenes commands, the imported images will be vectorized in colour and fit the camera frame. The image resulting from a colour vectorization will appear exactly as the original picture.

With the Storyboard Pro, more options are available which give you better control over the vectorization of imported images. To access these options, you must first select the Display Vectorize Options Dialog option in the Preferences dialog box.

1. Do one of the following:

   ‣ Select **Edit > Preferences** (Windows) or **Storyboard Pro > Preferences** (Mac OS X).

   ‣ Press [Ctrl] + [U] (Windows) or [⌘] + [,] (Mac OS X).
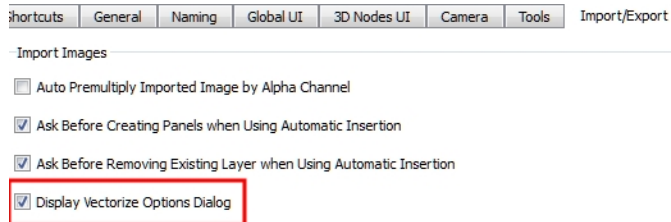
2. In the browser that opens, select the image to import.
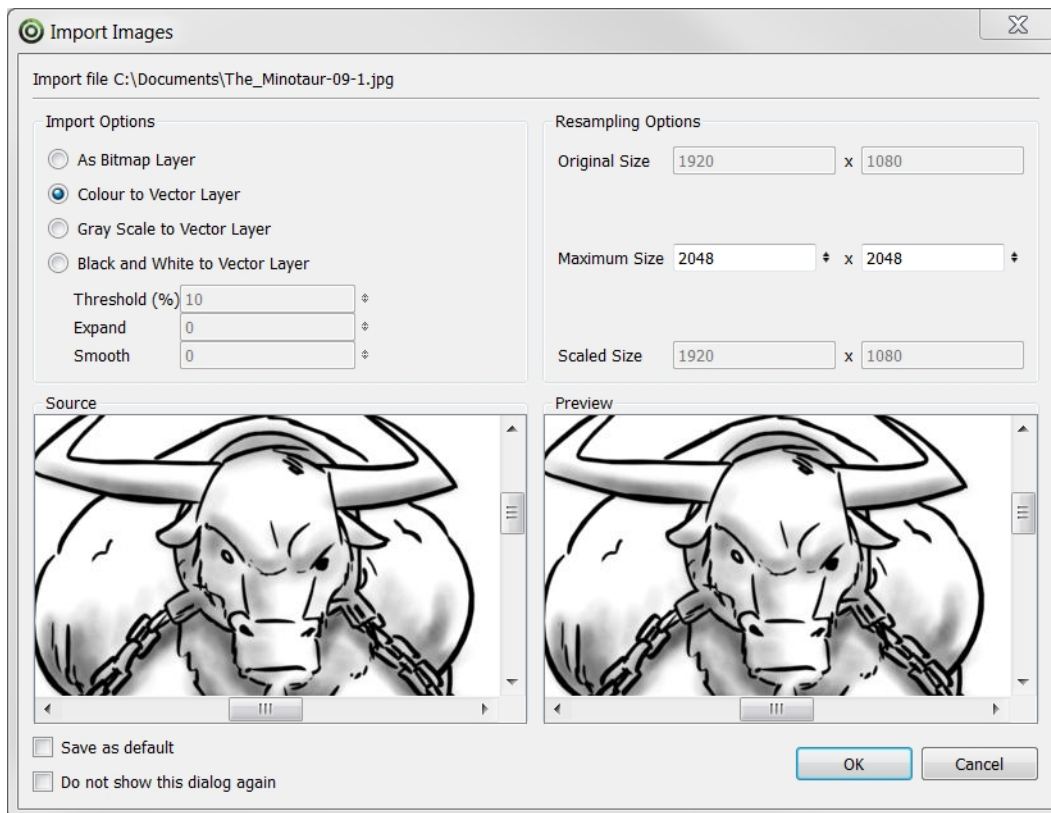
   The Import Images dialog box opens.

3. The preview area displays the original image on the left and the resulting image on the right. The preview of the resulting image automatically updates each time you modify a parameter.
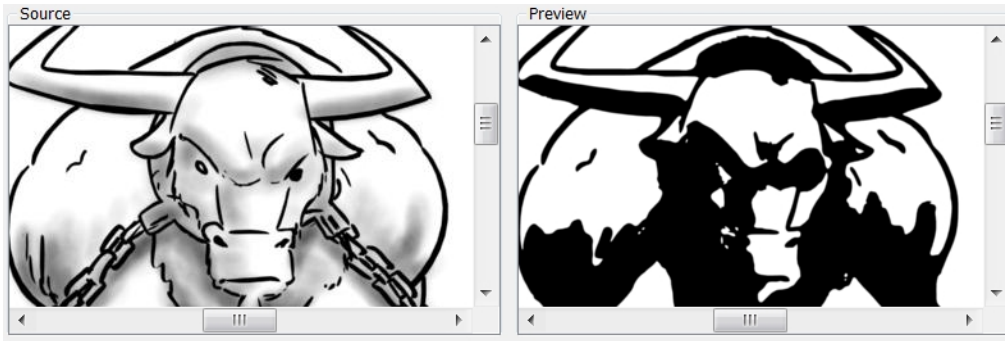
To set the Vectorization preferences:

4. In the Import Options section, set the following parameters:
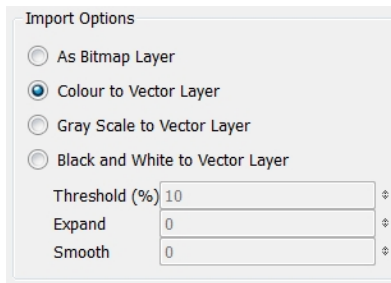
- ‣ **As Bitmap Layer**: Preserves the exact look of the imported images and imports it in a bitmap layer.

- ‣ **Colour to Vector Layer**: Preserves the exact look of the imported images and imports it in a vector layer.

- ‣ **Gray Scale to Vector Layer**: Imports the selected images as a gray scale in a vector layer.

- ‣ **Black and White to Vector Layer**: Imports the images as black line art. When you enable this option, more options become available:

- ‣ **Threshold (%):** Filters out noise in your images. Noise can be dirt or faint smudges on your scanned images. For example, if your value is set to 70%, all colour values below 70% are converted to white and ignored in the final image. If your value is set to 100%, only completely black lines will be kept.

- ‣ **Expand**: Enter a value between 1 and 100 to thicken lines or the outer edges of the bitmap. Use this option if your line art is too fine or pale so that their visibility is increased in the software.

- ‣ **Smooth**: Enter a value between 1 and 5 to set the smoothness level. Greater smoothness equals less jaggedness and imperfections, but at a greater loss to detail.

5. In the Resampling Options section, set the following parameters:

- ‣ **Maximum Size**: Enter a specific maximum size for your imported image to be scaled down to. The original ratio of the image will be preserved during the operation. You can see the final values resulting from the scaling process in the Scale Size fields. Note that you can not use these fields to scale up an image.

- ‣ **Scaled Size**: Displays the final size the image will be scaled after it is imported in your project.

6. Once you have set the vectorization options:

- ‣ **Saves as default**: Saves the current settings. Every time you open this dialog box, the new default parameters will automatically be set. The import images commands will still use this new default even if you deselect the Display Vectorize Options Dialog preferences.

- ‣ **Do not show this dialog again**: Deselect the Display Vectorize Options dialog option in the Preferences dialog box directly from here.

Combining Layers

Combining layers lets you merge selected layers to create a new layer.

This section includes the following topics:

Merging Layers

There are two ways to merge layers. You can merge layers quickly and simply using the Merge Layer command. If all the layers are vector layers, the new layer is vector. If all the selected layers are bitmap, the resulting layer is bitmap. If there is a mix of vector and bitmap, the resulting layer is bitmap. The newly merged layer is editable.

Using the Merge Layers dialog box gives you more control when merging layers; you can name the new layer, specify whether it is a vector or bitmap layer, select source layers, and more.

To quickly merge layers:

1. Select the layers to merge.

2. Right-click and select **Merge Selected Layers** or select **Layer > Merge Selected Layers** from the top menu.

To merge layers using the Merge Layers dialog box:

1. Select the layers to merge.

2. Right-click and select **Merge Layers** or select **Layer > Merge Layers** from the top menu.
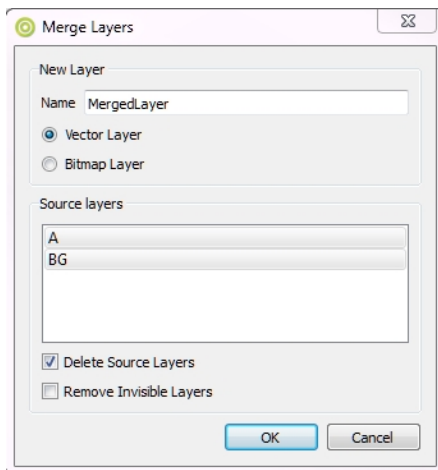
3. Do the following:

   ▸ **Name**: Type a name for the new layer. By default, the name of the layer is `MergedLayer`. Any newly merged layers will use this name and add a numerical suffix, i.e., `MergedLayer_1`, `MergedLayer_2`, and so on. You can draw on top of merged layers, but not modify them.

   ▸ **Delete Source Layers**: Deletes the source layers.

   ▸ **Remove Invisible Layers**: Removes invisible or hidden layers. This option is available only if the Delete Source Layers option is selected. Whether you decide to delete them or not, hidden layers will not be merged, even if selected from the list.

NOTE: To merge a hidden layer, you must first unhide any hidden layers.

NOTE: Layers containing 3D objects cannot be merged and will not be listed in the Merge Layers dialog box.

Editing a Merged Layer

After you have merged a layer, it is still possible to edit it. However, any previously defined motion in the source layers will be lost. If you choose not to allow the layer to be edited, transform motion will be kept. For example, if you are using an ***.swf** file and want to edit its layer, the layer you select will be kept. The rest of the layers will not be part of this layer.

To edit a merged layer:

▸ Right-click the merged layer and select **Convert to Drawing**, or select **Layer > Convert to Drawing** from the top menu.

Exporting Layers

When exporting layers, you can set the export behaviour for each layer. This can be handy if you have imported reference layers that you do not necessarily want to see in your final export. You can set individual layer export settings in the Layers panel.

To change individual layer export behaviour:

1. From the Thumbnails view, select the panel that contains the layers you want to export.

2. In the Layers panel, select a layer.

3. Depending on your needs, select the options for the formats to be included with the layer.
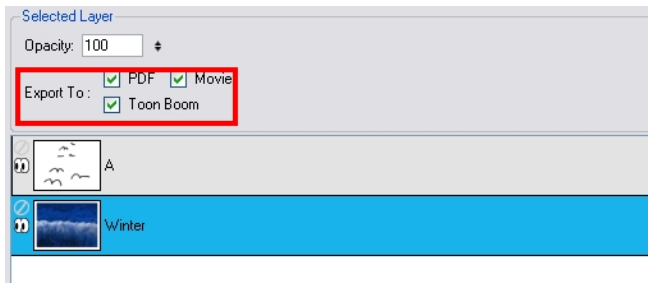
For example, if you do not want a certain layer to appear when you export a movie, deselect the Movie options for that particular layer.

Preferences

You can change the way layers are displayed in Storyboard Pro via the Global UI tab of the Preferences dialog box.

To open the Preferences dialog box:

1. Do one of the following:

▸ Select **Edit > Preferences** (Windows) or **Storyboard Pro > Preferences** (Mac OS X).

▸ Press [Ctrl] + [U] (Windows) or [⌘] + [,] (Mac OS X).
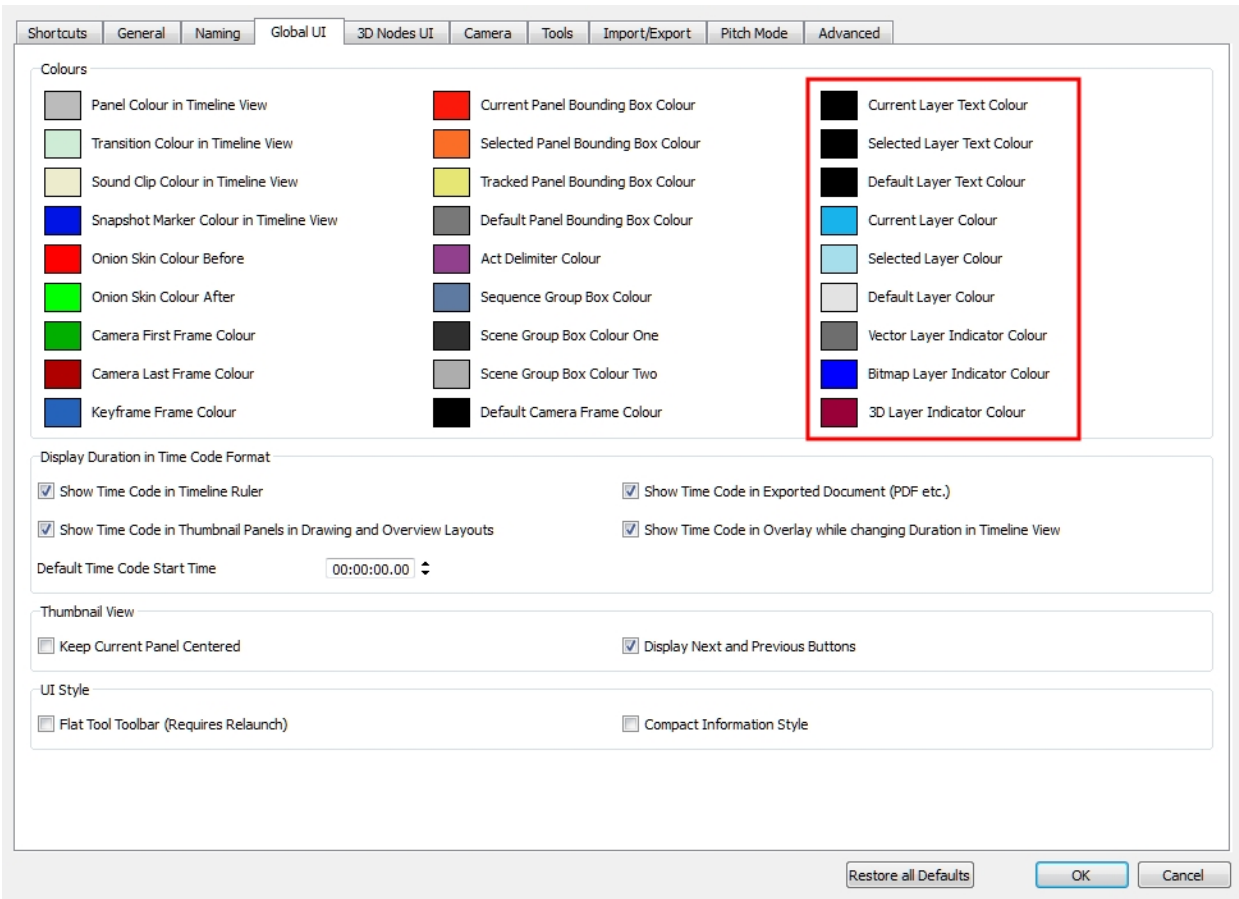
- **Current Layer Text Colour:** Changes the colour of the layer text when the layer is active.

- **Selected Layer Text Colour:** Changes the colour of the layer text when the layer is selected, but not active.

- **Default Layer Text Colour:** Changes the default colour of the layer text.

- **Current Layer Colour:** Changes the colour of the active layer.

- **Selected Layer Colour:** Changes the colour of selected layers which are not active.

- **Default Layer Colour:** Changes the default colour of a layer.

- **Vector Layer Indicator Colour:** Changes the default colour of a vector layer.

- **Bitmap Layer Indicator Colour:** Changes the default colour of a bitmap layer.

- **3D Layer Indicator Colour:** Changes the default colour of a 3D layer.

Chapter 6: Drawing

In Storyboard Pro, many powerful tools, views, and features are available for sketching and drawing with ease. This chapter describes the main assets needed when drawing and animating, as well as tips on how to start and use these tools efficiently.

This chapter includes the following topics:

How to Draw

Once you start Storyboard Pro, you can start to draw in the currently selected panel and layer. But first, you must decide on the style of drawing you are trying to achieve, and therefore, the type of layer you will be using: vector or bitmap. Whichever you decide upon, the associated tools become available for that type of layer–see *Layers* on page 151.

This section includes the following topics:

- *Drawing on a Vector Layer* on page 176

- *Drawing on a Bitmap Layer* on page 177

- *Drawing Your First Strokes* on page 179

Drawing on a Vector Layer

Vector layers allow you to create 2D graphics that are made of many individual, scalable objects. Each object is created by a mathematical equation rather than pixels, so they always display at the highest quality. Because they are scalable, vector objects are resolution independent. You can increase and decrease the size of vector objects and your lines remain crisp and sharp, which is ideal for cartoons! On vector layers, the colour is defined for the whole stroke.

You can place vector objects on top of other vector objects, but each object will still be able to be manipulated independently.

When drawing on a vector layer, you will be using a brush, pencil, or textured brush.

Using a Vector Brush or Pencil

Brush

Pencil
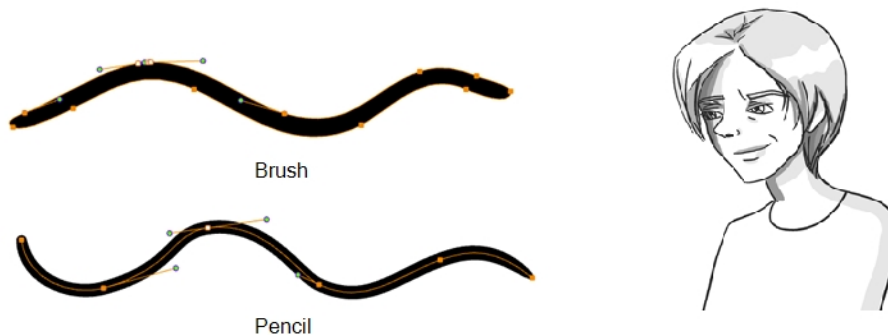
Vector brushes produce files that are very light, and are ideal for long projects because you do not have to compromise on efficiency during playback. Also, you can modify the shape of the lines after you draw them using the Contour Editor or Perspective tool. The strokes are stored as separate lines until the drawing is flattened.

- **Advantage**: File sizes are light.

- **Disadvantage**: Cannot get natural media-style textured drawings.

- **Recommended Use**: For clean drawings, sketchy vector drawings, drawings you want to reuse from different distances (close, mid, far).

Using a Textured Brush

Textured brushes allow you to create lines that feel more like natural media, like working with a pencil on paper for example. With this kind of stroke, you can still move the strokes around after you draw them. You cannot, use the Contour Editor or Perspective tool on this kind of line.

- **Advantage**: You can get a natural media feel, and still have the ability to modify the position of lines after you draw them.

- **Disadvantage**: File sizes can get heavy. Although some strokes can be flattened, they cannot be flattened when you use different colours. Also, you can only have one colour/shade applied for the entire length of the line.

- **Recommended Use**: For textured drawings in which you can adjust the position of the lines later.

Drawing on a Bitmap Layer

Bitmap layers allow you to create 2D graphics. The bitmap lines you create are made of pixels on a grid that resemble tiny dots, which altogether make up the drawing you are creating or artwork you are importing. Bitmap graphics impart a more natural and soft look to your work. The colour is defined on a pixel-by-pixel basis.

Drawing on a bitmap layer allows you to draw in a similar way to how you would in a bitmap tool like Photoshop or Painter. Although you cannot modify the position of the lines after you draw them, you can draw and erase. Instead of drawing lines, you are laying down the individual pixels. This gives you finer control over the brush itself, as well as the shading and colour of the drawing. However, the strokes cannot be edited with the Contour Editor or Perspective tool. It is more efficient for storing texture information than a textured brush on a vector layer, so if you are creating drawings with a lot of texture, this may be a better option.

- **Advantage**: File sizes are not as heavy as when you use textured brushes on a vector layer, since each stroke does not have to be remembered individually. Also, you have full artistic control over the style of the drawing.

- **Disadvantage**: You cannot modify the lines after you draw them. Simply draw and erase, like you would on paper. Also, it can be difficult to reuse the drawing at multiple distances.

- **Recommended Use**: When creating drawings with a lot of texture, for a natural media feel. Particularly when you want a wide variety in colour and shading, this is where you will see the real advantage.

Drawing Tools Available

Depending on the type of layer you select, here are the tools available:

Tool		Vector Layer	Bitmap Layer
	Select	•	•
	Select By Colour	•	
	Cutter	•	•
	Contour Editor	•	
	Perspective	•	
	Edit Gradient/Texture	•	
	Brush	•	•
	Pencil	•	
	Text	•	•
	Eraser	•	•
	Rectangle	•	•
	Paint	•	
	Paint Unpainted	•	
	Unpaint	•	
	Close Gap	•	
	Ellipse	•	•
	Line	•	•
	Dropper	•	•

Drawing Your First Strokes

Once you start Storyboard Pro, you can start to draw in the currently selected panel and layer. But first, you must decide on the style of drawing you are trying to achieve, and therefore, the type of layer you will be using: vector or bitmap. Whichever you decide upon, the associated tools become available for that type of layer—see *Layers* on page 151.

These are the general steps to start drawing in Storyboard Pro.

To draw:

1. In the Timeline or Thumbnails view, click a panel.

2. Select a vector or bitmap layer on which to draw—see *Layers* on page 151.

3. In the Tools toolbar, select the Brush ✎ tool or press [Alt]+[B]—see *Drawing with the Brush Tool* on page 192.
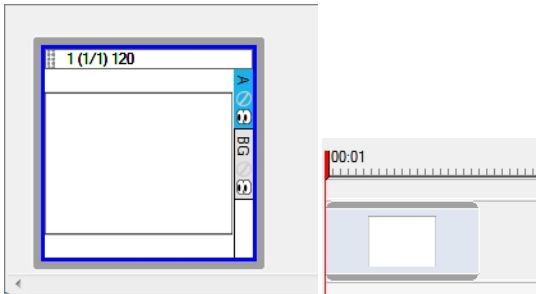
4. In the Stage view, start drawing.

5. You can change the current colour by adjusting the sliders in the Colour view, or click a swatch to use that colour. To add colour swatches, see *Adding a Colour Swatch* on page 296.
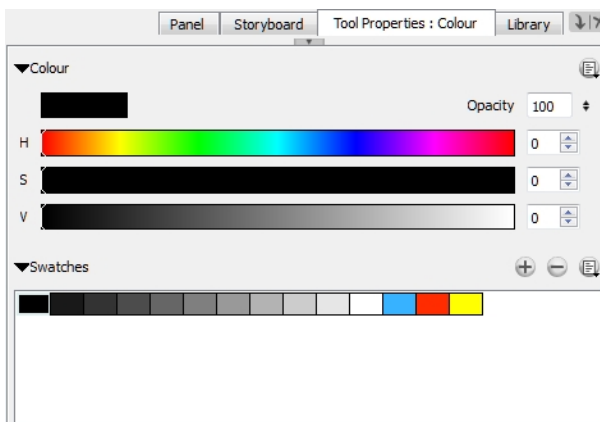
NOTE: If you enabled your project to be 3D 🌐 and rotated your 2D layers within the 3D space, you might not be able to draw on your layer. This is because the 2D layer that was rotated is no longer perpendicular to the Stage view. When this happens, click the Look at Selected ⬚ button in the status bar of the Stage view—see *Working in a 3D Space* on page 257.

Viewing Tool Properties

When drawing with any of the tools, you can access and change its properties in two ways: the Tool Properties view or Tool Properties window.

The Tool Properties view displays the properties of the currently selected tool on the current layer you are drawing on. For example, if you are drawing on a vector layer, then all of the tools are available to you. If you are drawing on a bitmap layer, some tools are not available like the Pencil, Contour Editor, and Perspective tools.

The Tool Properties window offers additional properties for the current tool.

To access the Tool Properties view of a tool:

1. From the Tools toolbar, click any of the following tools:

   ‣ Brush   tool or press [Alt]+[B].

   ‣ Pencil   tool or press [Alt]+[9].

   ‣ Text   tool or press [Ctrl]+[Shift]+[T] (Windows) or [⌘] +[Shift]+[T] (Mac OS X).

   ‣ Eraser   tool or press [Alt]+[E].

   ‣ Paint   tool or press [Alt] +[I].

   ‣ Rectangle   tool.

   ‣ Ellipse   tool.

   ‣ Line   tool.

2. In the Panel view, click the View   menu and select **Tool Properties**.
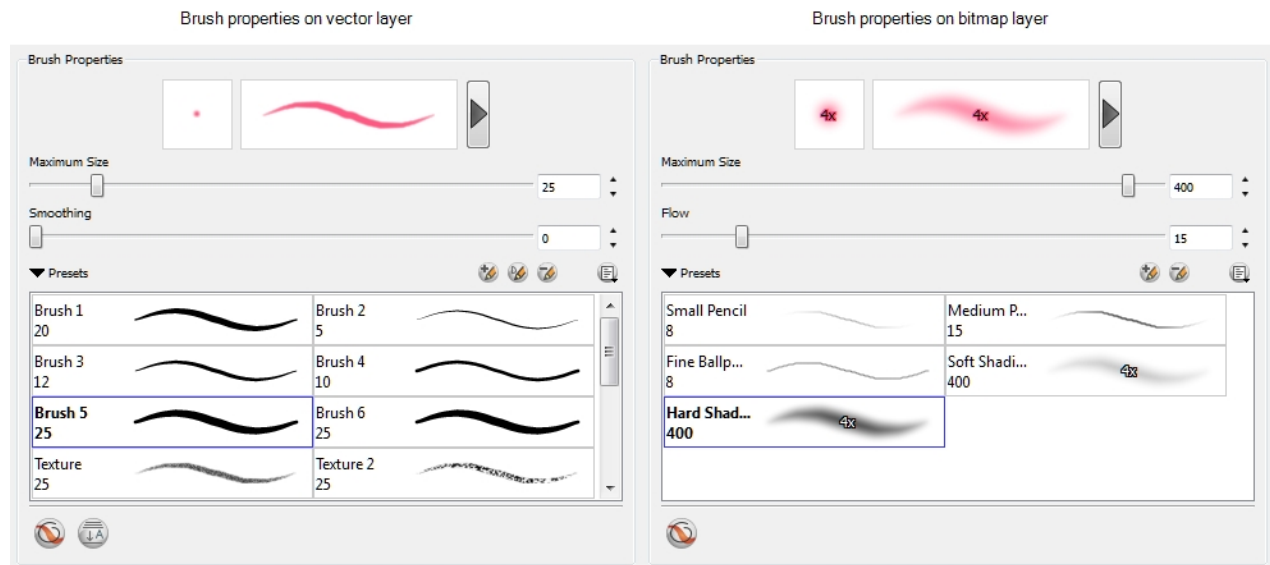
To access the Tool Properties window:

‣ In the Tool Properties view, click the arrow button.

The Properties window of the tool you are using opens.
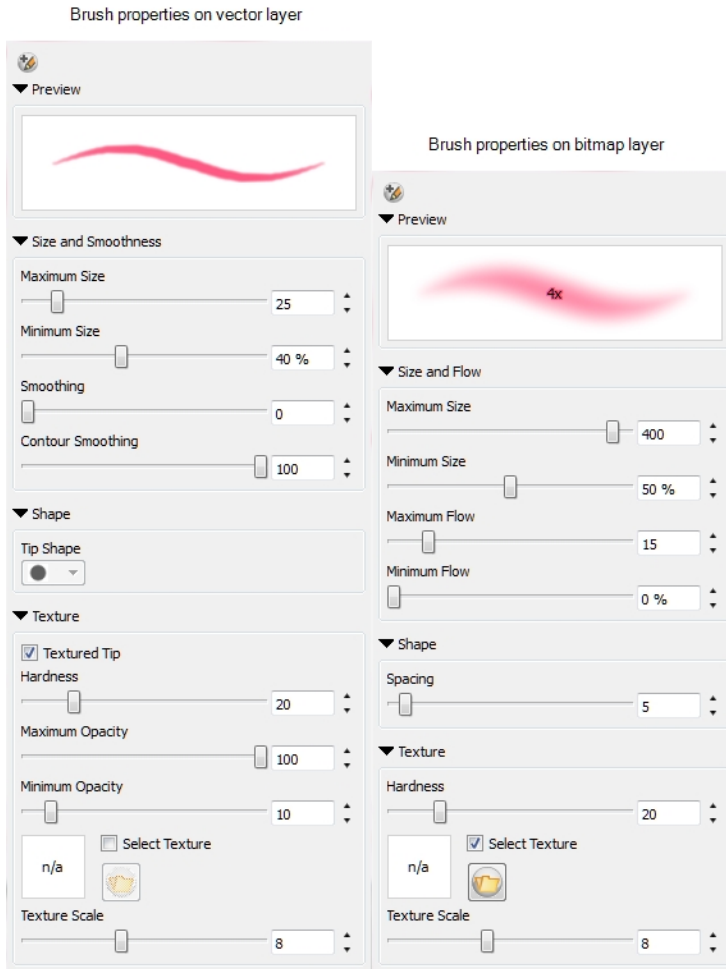
Setting Up the Drawing Space

Before you start drawing and creating elements for a panel, you must set up your drawing space, so you can efficiently access the tools you use most often.

Displaying the Grid

Using a grid is useful when positioning or drawing objects and characters in a scene. You can use the Show Grid option to display several different kinds of grids in the Stage or Camera views.

To display the grid, do one of the following:

‣ Click the Grid ⊞ button at the bottom of the Stage or Camera view.

‣ Select **View > Grid > Show Grid**.

‣ Press [Ctrl]+[G] (Windows) or [⌘]+[G] (Mac OS X).

From the top menu, select **View > Grid** and one of the following:
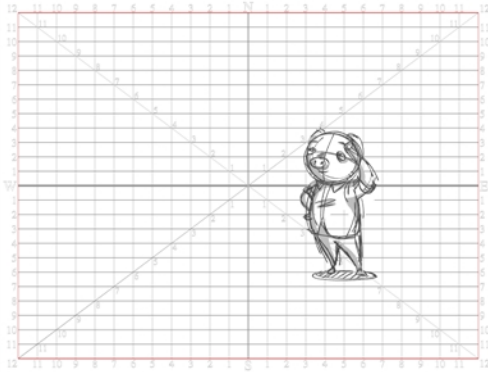
‣ **Grid Outline Only:**Displays only the contour of the grid.

‣ **Underlay:** Displays the grid behind the drawing elements.

‣ **Overlay:** Displays the grid over the drawing elements.

‣ **Square:** Displays a standard square grid.

‣ **12 Field Grid**: Displays a 12 field size grid.

‣ **16 Field Grid**: Displays a 16 field size grid.

‣ **World Grid**: Displays a reference grid that remains the same size when you scale objects. This is useful when you want a reference point when creating elements in your drawings.

Grouping and Ungrouping Objects

By grouping objects together, you can reposition, scale and apply other transformations to multiple objects of a drawing. You can also ungroup a group of objects to fine-tune individual objects.

> NOTE: You can only group objects on one vector layer, you cannot group objects from several layers. Also, you cannot group objects on bitmap layers.

To group or ungroup objects:

‣ Select object(s) in the Stage view, then select **Edit > Group Drawing Selection** or **Ungroup Drawings.**

✍ Panning the Drawing Space

Use the Hand tool to pan through the Stage view.

To pan the Stage view:

1. In the Tools toolbar, click the Hand   tool or hold down the [Spacebar].

2. Click in the Stage view and move the mouse in the direction you want to pan the view.

3. In the Tools toolbar, select the Hand   tool, click in the Stage view and drag your cursor. You can also select the Hand tool from the top menu: **Tools > Pan**.

To reset pan:

▸ From the top menu, select **View > Reset Pan** or press [Shift]+[N].

▸ You can also hold down the [Spacebar], click in the Stage view and move your mouse in the direction you want to pan the view.

Rotating the View

Use the Rotate View tool to rotate the Stage view in the same way as you would with a real animation disc.

You can also use the menu options to rotate the Stage view in 30 degree increments.
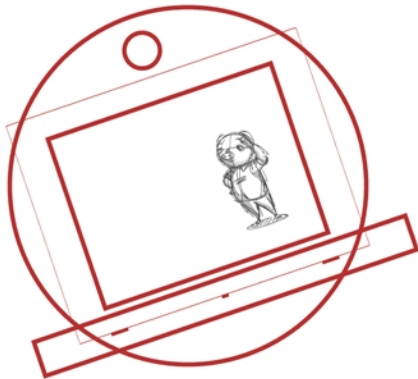
To rotate the Stage view:

1. Do one of the following:

▸ From the Tools toolbar, click and hold the Hand tool   button and select **Rotate View**.

▸ Hold down [Ctrl]+[Alt] (Windows) or [⌘]+[Alt] (Mac OS X).

2. Drag the cursor in the Stage view to rotate the view.

You can also use the menu options to rotate the Stage View in 30 degree increments.

To rotate the Stage view in 30 degree increments:

‣ Select **View > Rotate View CW** (clockwise) or press [V].

‣ Select **View > Rotate View CCW** (counterclockwise) or press [C].

To reset rotation:

‣ Select **View > Reset Rotation** or press [Shift]+[X].

🔍 Changing the Zoom Level

Zooming in and out of the Stage view lets you see elements close up and far away.

To zoom the Stage view:

‣ From the Tools toolbar, click and hold the Hand tool ✋ button and select **Zoom**. Click the Stage view to zoom in. Press [Alt] to zoom out.

‣ **Zoom In**: Select **View > Zoom In** or press [2]. When the Zoom In mode is selected, hold [Alt] as you click to zoom out.

‣ **Zoom Out**: Select **View > Zoom Out** or press [1].

To reset zoom:

‣ Select **View > Reset Zoom** or press [Shift]+[Z].

Zoom Tool Properties

When you select the Zoom tool from the Tools toolbar, its properties are displayed in the Tool Properties view.
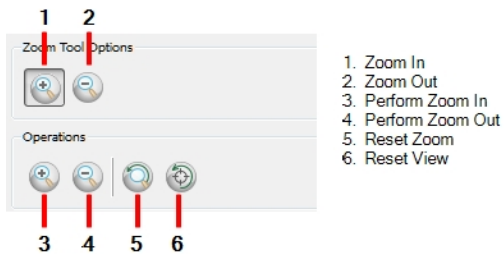
Zoom In/Zoom Out: Lets you zoom in or out.

Zoom In : Lets you zoom in the camera. The default keyboard shortcut is [2].

Zoom Out: Lets you zoom in the camera or Drawing view. The default keyboard shortcut is [1].

Reset Zoom: Restore the zoom level to 100%. The default keyboard shortcut [Shift]+[Z].

Reset View: Restore the original display by resetting any zooms, pans, or rotations.

Setting the Drawing Preferences

When drawing or animating traditionally in Storyboard Pro, there are preferences you can set to help you work more efficiently.

To open the Preferences dialog box:

1. Do one of the following:

    ‣ Select **Edit > Preferences** (Windows) or **Storyboard Pro > Preferences** (Mac OS X).

    ‣ Press [Ctrl] + [U] (Windows) or [⌘] + [,] (Mac OS X).

The following tabs help you configure drawing preferences:

- *Advanced Preferences Tab* on page 185
- *Camera Preferences Tab* on page 187
- *Tools* on page 188

Advanced Preferences Tab

The preferences in the Advanced tab control how drawings are displayed (which can affect system performance) and how your hardware interacts with Storyboard Pro:
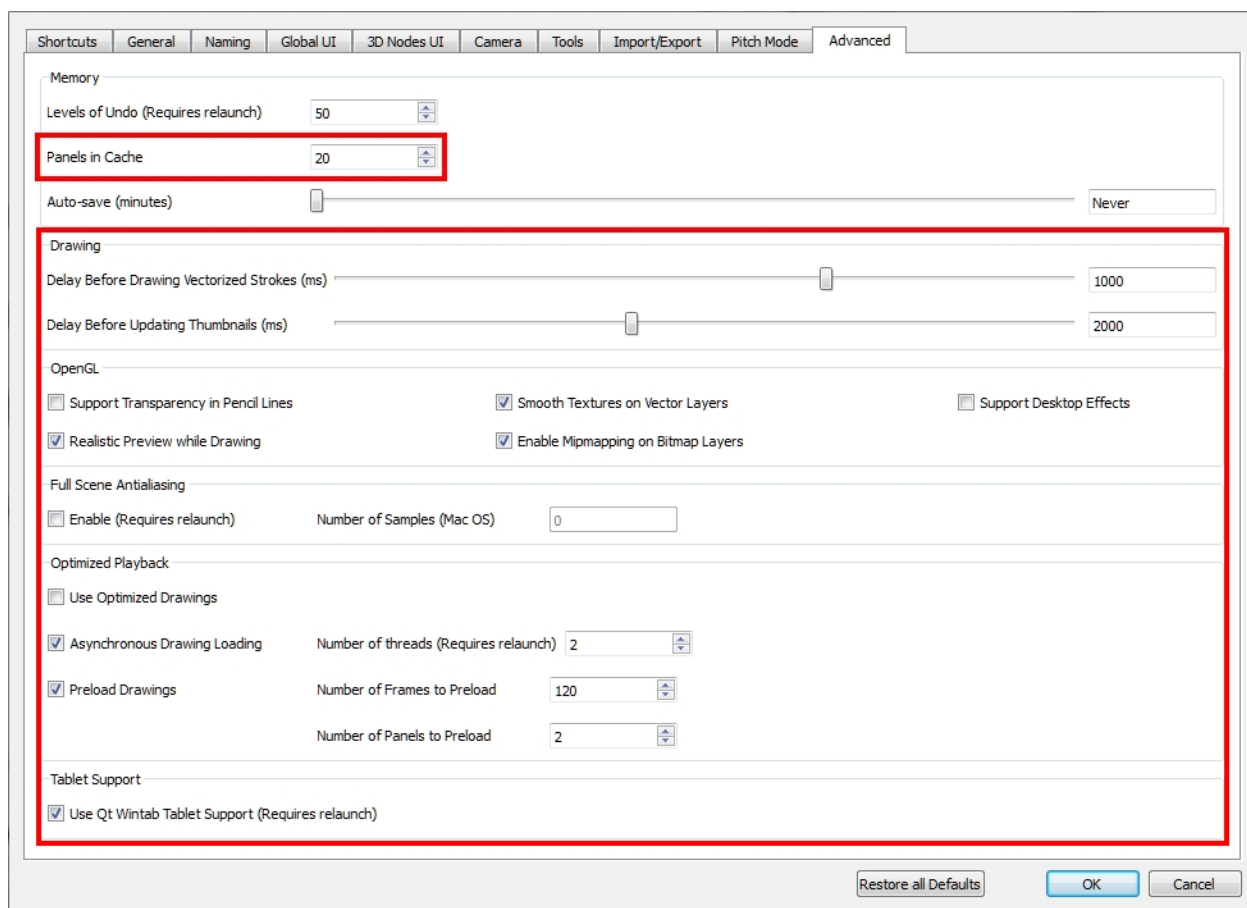
Memory

- **Panels in Cache**: When you work with Storyboard Pro, the OpenGL drawings are loaded in the cache to optimize the display and playback. You can increase or decrease the number of drawings loaded in your cache. The default value is 20.

Drawing

- **Delay Before Drawing Vectorized Strokes (ms):** When you draw in Storyboard Pro, the strokes are vectorized as you go. As soon as you release the drawing tool, the lines are vectorized. When you quickly sketch a numerous series of lines, it may happen that the vectorization process interferes with your drawing action. To avoid this, you can delay the vectorization process by increasing the delay value.

- **Delay Before Updating Thumbnails (ms):** When you modify a drawing, the thumbnail displayed in the Thumbnails and Timeline views are updated. By default, the update process is delayed so it does not slow down the application while you draw. The lower the number of milliseconds, the faster the updates and vice versa.

Open GL

- **Support Transparency in Pencil Lines:** When selected, the pencil lines are displayed normally. The lines will be opaque (unless there are transparencies). Deselecting this option reduces rendering times, but displays additive opacities for overlapping pencil lines and unevenly filled, curved pencil lines.

- **Realistic Preview while Drawing:** Enable the Realistic Preview option if you want to have live preview of shapes in Draw Behind mode, which is for painting behind existing art. When using this mode, strokes appear instantly under your work while drawing with the Draw Behind mode.

- **Smooth Textures on Vector Layers:** Improves the appearance of vector brush strokes that use bitmaps for the colour or opacity, such as a vector drawing layer, vector brush with texture applied.

- **Mipmapping on Bitmap Layers**: Generates antialiased mipmap textures. Deselect this option to increase performance when working on bitmap layers with non-standard graphics cards. Mipmapping can cause some issues with lower-end video cards.

- **Support Desktop Effects**: Enable this option for better compatibility with Windows 7, Windows Vista, and Mac OS X effects. This prevents graphics compositing problems from occurring when the Full Scene Antialiasing option is selected.

Full Scene Antialiasing

This option lets you see smooth lines as you draw, as well as an antialiased drawing area. You can change the value of the Full Scene Antialiasing using the Preferences dialog box to fit the current level used in the Stage view. By default, this option is deselected—see *Viewing the Final Lines While Drawing* on page 189.

Optimized Playback

Asynchronous Drawing Loading: Allows drawings to be loaded in the background while playing back a panel. This way, playback is continuous. You can specify the number of concurrent drawings loaded at the same time. This should be set according to a machine's number of cores.

Preload Drawings: Defines the number of drawings or panels to load during playback.

Tablet Support

- **Use QT Wintab Tablet Support**: Use Qt Build in Wintab API (Application Programing Interface) to support the tablet, instead of the Windows Realtime stylus API. If your pen tablet is not responding as expected, deselect this option and use the Windows Realtime stylus API. By default, this option is enabled.

Camera Preferences Tab

When drawing, there are preferences on the Camera tab that let you control how the drawings appear in the Onion Skin and Light Table features.
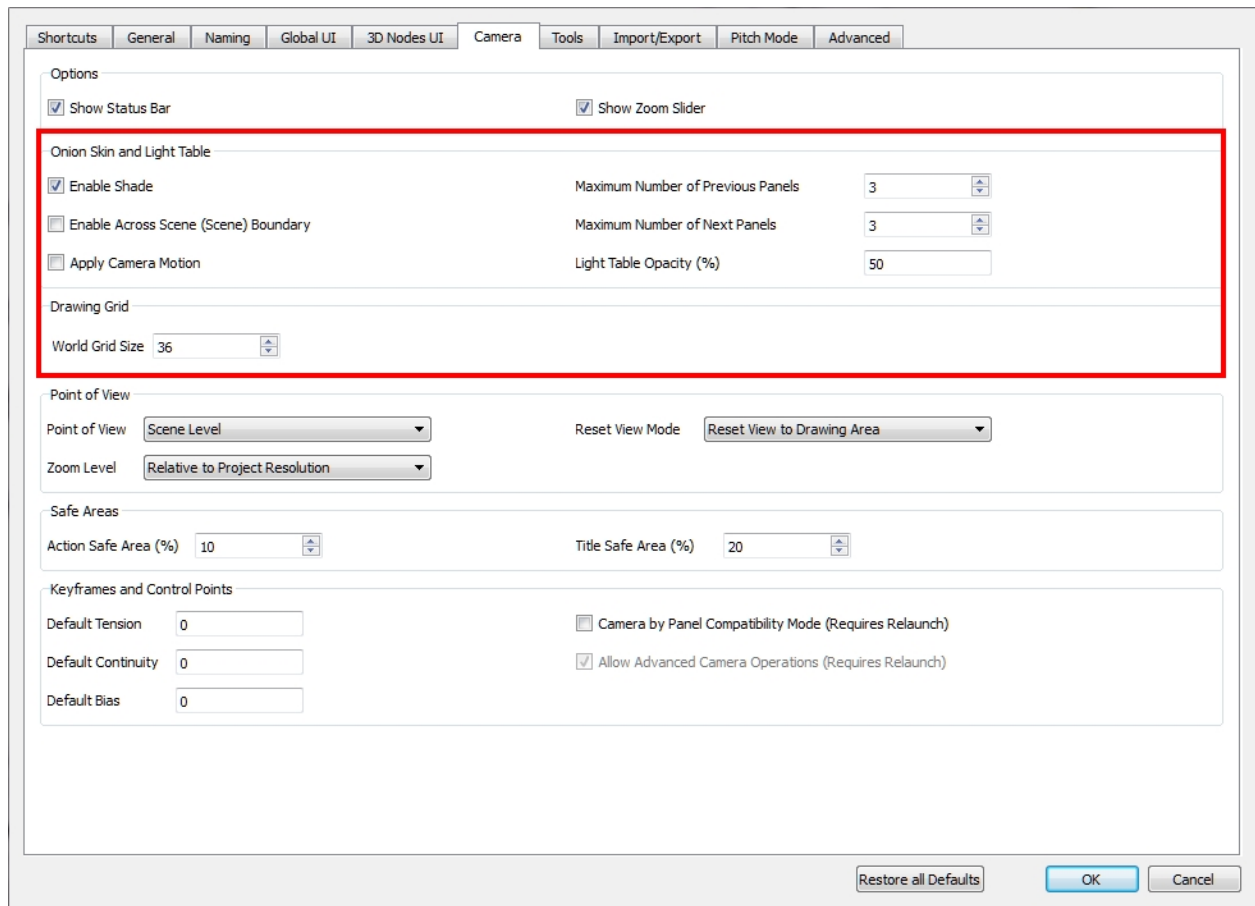
Onion Skin and Light Table Preferences

- **Enable Shade**: The previous onion skinned drawings are displayed in washed out red shades and the next onion skinned drawings are displayed in washed out green shades.

- **Enable Across Shot (Scene) Boundary**: Enable the display of onion skin layers from panels outside the current shot or scene.

- **Apply Camera Motion**: Enables camera motion on the onion skin layers.

- **Maximum Number of Previous Panels**: This value corresponds to the number of previous panels displayed in the Onion Skin preview. The default value is 3.

- **Maximum Number of Next Panels**: This value corresponds to the number of next panels displayed in the Onion Skin preview. The default value is 3.

- **Light Table Opacity (%)**: While using the light table in the Stage view, this value corresponds to the percentage of transparency applied to all other layers except the currently selected one.

Drawing Grid

- **World GridSize**: Displays a reference grid that remains the same size when you scale objects. This is useful when you want a reference point when creating elements in your drawings.

Tools

The preferences in the Tools tab control how the drawing tools create lines.
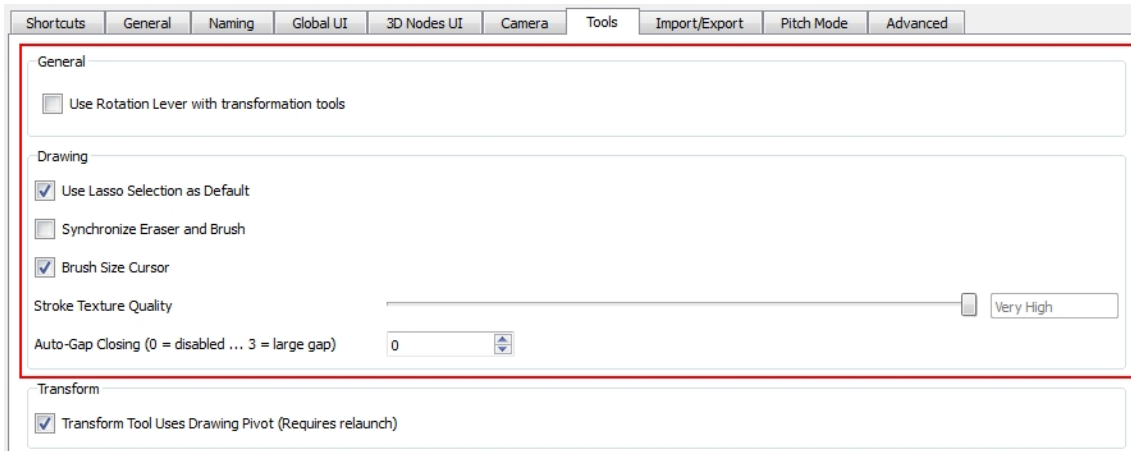
General Preferences

- **Use Rotation Lever with Transformation Tools**: When selected, displays a handle for use with the Select, Cutter and Transform tool. The handle lets you easily manipulate a stroke.

Drawing Preferences

- **Use Lasso Selection as Default:** When selected, the selection tool is a lasso and a rectangular marquee when [Alt] is pressed. When deselected, the selection tool is a rectangular marquee and a lasso when [Alt] is pressed.

- **Synchronize Eraser and Brush Selection:** Syncs the brush and eraser, so they are the same size. Be default, this option is deselected.

- **Brush Size Cursor**: This preference is disabled by default. By default, the Brush tool shows a crosshair cursor. Enable this preference if you want to display the shape of the current brush size as the cursor.

- **Stroke Texture Quality:** Specifies a texture quality value between very low and very high for the brush stroke, or accepts the default value of low.

- **Auto-Gap Closing:** Specifies the initial default setting for automatically closing gaps as you paint. Select from the following tolerance levels:

  - **0** = disabled
  - **1** = small gap
  - **2** = medium gap
  - **3** = large gap

Viewing the Final Lines While Drawing

When drawing on vector layers, the lines may appear jagged. This is the fast, real-time display called *OpenGL*. If you prefer to see smooth lines as you draw, you can enable the antialiasing.
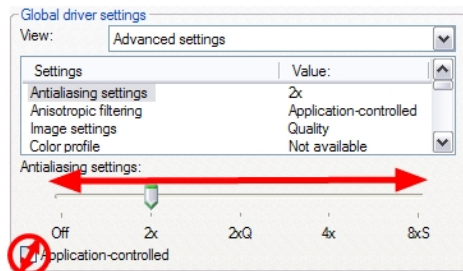
Full Scene Antialiasing

Full scene antialiasing is generated by your computer's graphics card. Full Scene Antialiasing is a preference you can turn on or off. By default, the Full Scene Antialiasing preference is deselected.

> **NOTE:** Full Scene Antialiasing parameters are only valid while you work in your scene. This option will not affect the final render.

To customize the Full Scene Antialiasing parameters:

> **NOTE:** This procedure requires you to restart Storyboard Pro.

1. If you are using Windows, you must enable your graphics card's antialiasing parameter. Refer to your graphics card manufacturer's user guide to learn how to do so. For example, the parameters for an NVIDIA GeForce card may look like this:

2. Open the Preferences dialog box:

   ‣ **Windows**: Select **Edit > Preferences** or press [Ctrl] + [U].

   ‣ **Mac OS X**: Select **Storyboard Pro > Preferences** or press [⌘] + [,].

3. In the Advanced tab, go to the Full Scene Antialiasing section:

   ‣ **Enable (requires relaunch):** Select the **Enable** option to enable or disable the Full Scene Antialiasing.

   ‣ **Number of samples (Mac OS)**: Enter the number of samples to be used for the antialiasing process. The number of samples is equivalent to the number of times a pixel will be enlarged to calculate the

antialiasing. This is called *supersampling*. The higher the number of samples, the better the antialiasing quality, but the longer it will take to calculate. The recommended value is 2 or 4.

4. Restart Storyboard Pro.

Drawing within the 3D Space

When you enable 3D in your project, you can move and rotate your drawings within the 3D space. Once you rotate a 2D layer in 3D, you may receive a No Entry cursor, preventing you from drawing on that particular layer. This is because the layer is no longer perpendicular to the Stage view.
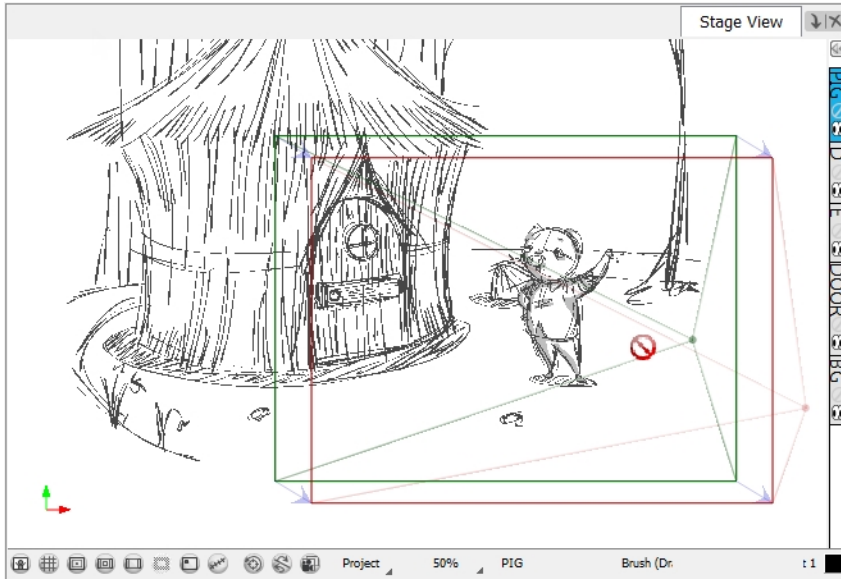
When this happens, you can use the Look At Selected option to automatically align the view, so the selected layer becomes perpendicular to the Stage view, allowing you to draw.
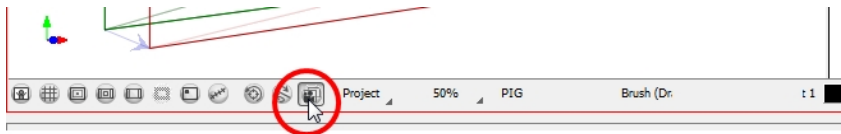
> **NOTE:** Refer to *Working in a 3D Space* on page 257 to learn more about storyboarding in 3D.

To automatically align the drawing layer to be perpendicular to the Stage view:

1. In the Layers view, select a layer.
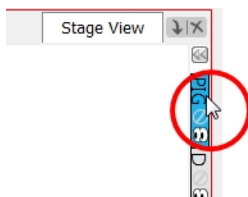
2. In the status bar at the bottom of the Stage view, click the Look At Selected 🔲 button.

The drawing layer and Stage view automatically become perpendicular to one another, allowing you to draw.
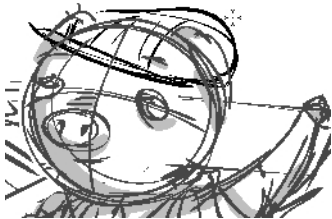
Drawing with the Brush Tool

The Brush tool is used to draw and sketch on vector and bitmap layers.

If you want sketch a drawing using a semi-transparent colour to get a paper-like feel, then use the Brush tool as it produces a more realistic and natural feel.

The Brush tool is pressure sensitive and lets you create a contour shape with a thick and thin line effect, as if the drawing was made with a brush.

To draw with the Brush tool:

1. In the Thumbnails or Timeline view, select the panel on which you want to draw.
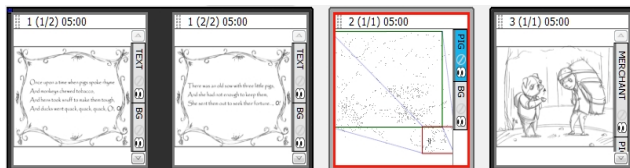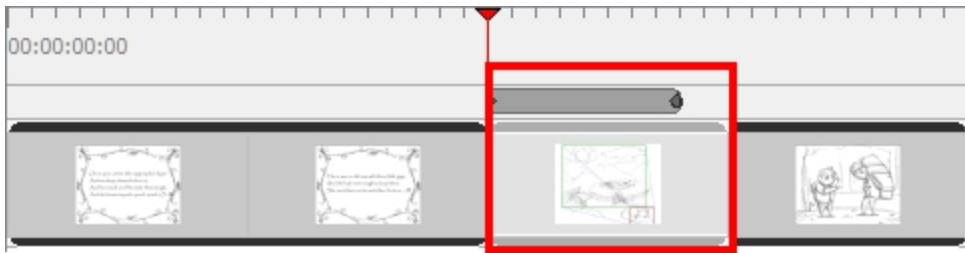
2. In the Thumbnails or Stage view, select a layer to draw on.
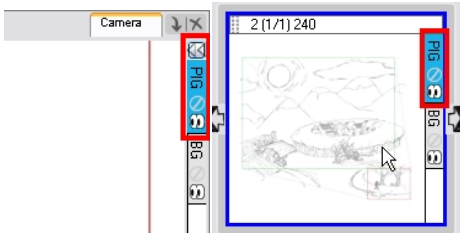
3. In the Tools toolbar, select the Brush ✎ tool or press [Alt]+[B].

4. You can change the current colour by adjusting the sliders in the Colour view, or click a swatch to use that col-our. To add colour swatches—see *Adding a Colour Swatch* on page 296.

5. In the Stage view, start drawing.

    ‣   Hold [Ctrl] (Windows) or [⌘] (Mac OS X) to force a line to join the start and end of the stroke while drawing.
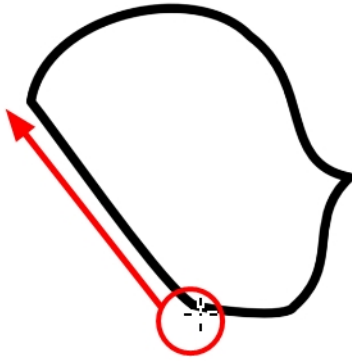
- ► Hold [Shift] to force the brush to draw a straight line at any angle.
- ► Hold [Shift]+[Alt]to force the brush to draw a straight line in 15 degree increments.
- ► Press []](close bracket) to increase the brush tip size by 5.
- ► Press [[](open bracket) to decrease the brush tip size by 5.
- ► Hold the [O] key, click and drag to resize your brush dynamically, then release the mouse when the desired maximum thickness is reached.

Changing the Brush Tool Cursor Display

By default, the Brush tool cursor is displayed as a crosshair cursor, you can change the behavior to display the cursor as a shape of the current brush size.

Default cursor   Brush size cursor
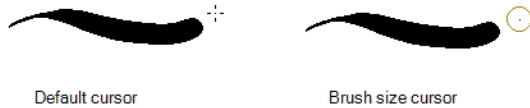
To change the Brush tool cursor display:

1. Open the Preferences dialog box:

   - ► Select **Edit > Preferences** (Windows) or **Storyboard Pro> Preferences** (Mac OS X).
   - ► Press [Ctrl] + [U] (Windows) or [⌘] + [,] (Mac OS X).

2. Select the **Tools** tab.

3. In the Drawing section, select the **Brush Size Cursor** option.
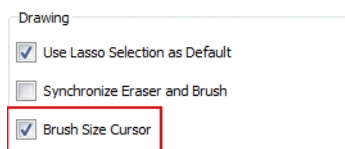
4. Click OK.

   The cursor displays the current brush size.

Changing the Brush Mode

When you select the Brush tool, the Tool Properties view displays the different Brush modes that control how the Brush line is drawn: Regular, Draw Behind, and Auto Flatten.

Regular Brush Mode

The Brush tool creates contour lines as you draw on vector layers, adding each brush line on top of the previous ones. On bitmap layers, the Brush tool creates 2D graphics, laying down individual pixels.

Draw Behind

When drawing on vector layers, the Draw Behind mode lets you paint behind existing art. By default, strokes appear over your work until you release the tool. If you want a live preview of your stroke in draw behind mode, you must activate the Realistic Preview option.

To activate Realistic Preview:

‣ From the top menu, select **View > Realistic Preview**.

Auto Flatten Mode

When drawing on vector layers, lines do not usually become one object. The Auto-Flatten mode automatically merges lines created with the existing ones into one single object as you draw.

When drawing on a bitmap layer, you are laying down the bare pixels, so they are always flattened. You can no longer access the individual stroke after you draw it.

> **NOTE:**
> Using the Select tool, you can use select and remove a segment of flattened pencil lines. Overlapping pencil lines drawn with the Auto-Flatten mode enabled are essentially cut into segments by the overlap and can therefore be treated as individual lines.

Selecting a Brush Style

A variety of brush styles are provided allowing you to create and save your own. This way you can create brushes with precise sizes and parameters and save them so you can draw and design.

To select a brush style:

• In the Tool Properties, select a brush style from the Brush Presets section.

The Brush properties are displayed. What you see depends on whether you are drawing on a vector or bitmap layer.
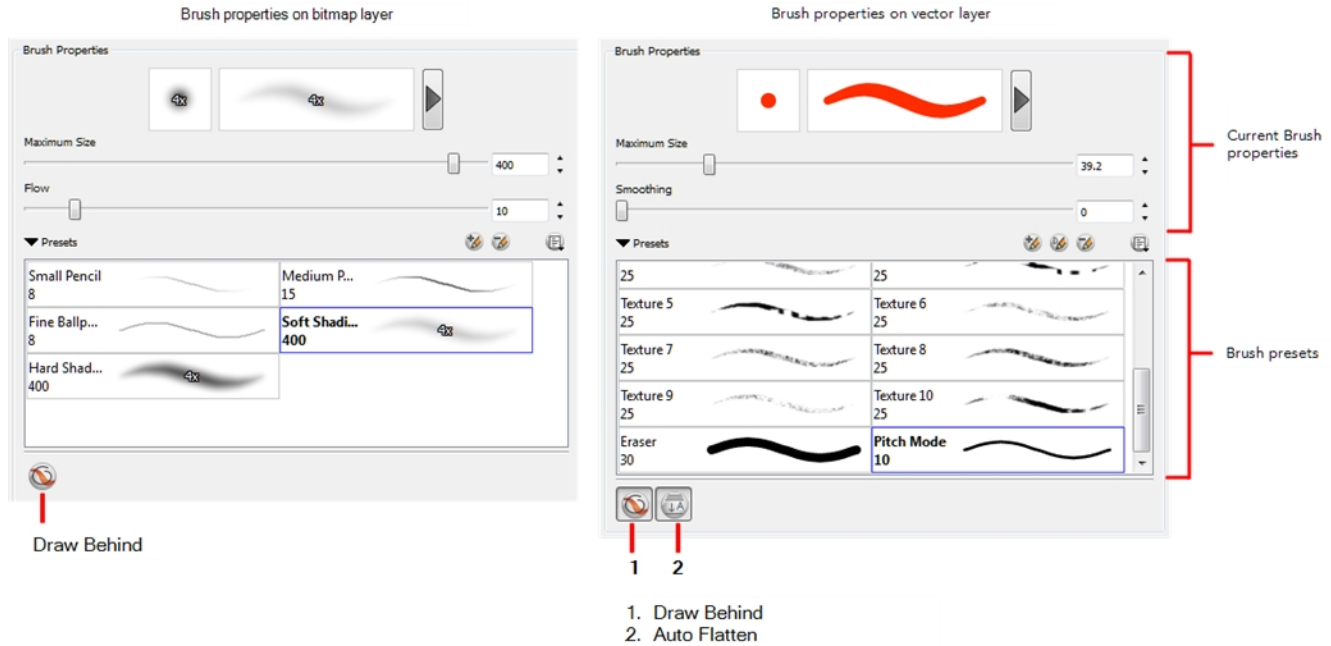
Changing the Brush Display

There are several ways to display the available brushes: small or large thumbnails, or strokes.

To change the brush display:

▸ In the Tool Properties view, click the Brush ▤ menu, and select **Small Thumbnail**, **Large Thumbnail**, or **Stroke View**.

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Adding Customized Brush Patterns with the Dynamic Brush

When creating drawings for a panel, there may be a specific object that is repeated many times to create a bigger picture, such as a landscape. The object can be a blade of grass, tree, or rock. Instead of creating this drawing and then copy/pasting it over and over again, you can create a pattern and assign it as its own brush.

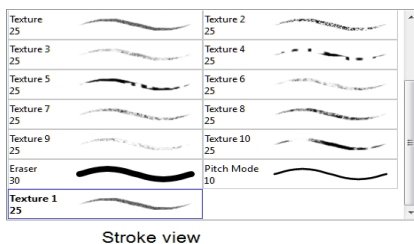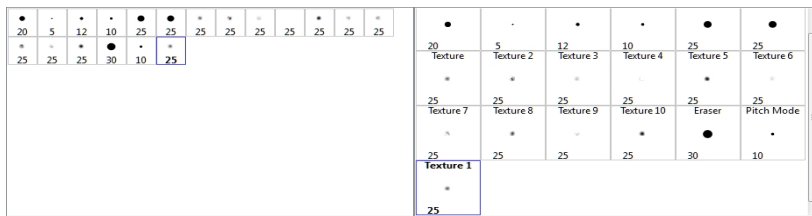You can create your pattern, select it, and add it to your brush styles using the Dynamic brush.

To add a pattern to your brush styles using the Dynamic brush:

1. Use the Brush drawing tool to create a small drawing.

NOTE: If you are drawing on a vector layer, you may want to select Auto Flatten mode to help create a single object.

2. Use the Select tool to choose the parts of the drawing you want to use as the pattern.

3. In the Tool Properties view, click the New Dynamic Brush button to use the current layer as a new brush pattern.

   If you do not want to use the entire layer as the brush pattern, select the parts of the drawing you want to use as the pattern. If you do this, you must reselect the Brush tool before you click the New Dynamic Brush button.

   When you add the Dynamic Brush to your brush styles list, it is given a default name and a preview appears in the Tool Properties view. You can use the Rename Brush button to give the Dynamic Brush a more meaningful name.

4. Use the new Dynamic Brush to quickly repeat a pattern.

To create a Dynamic Brush with multiple drawings:

1. Create drawings on the same layer of multiple panels or multiple layers of the same panel.
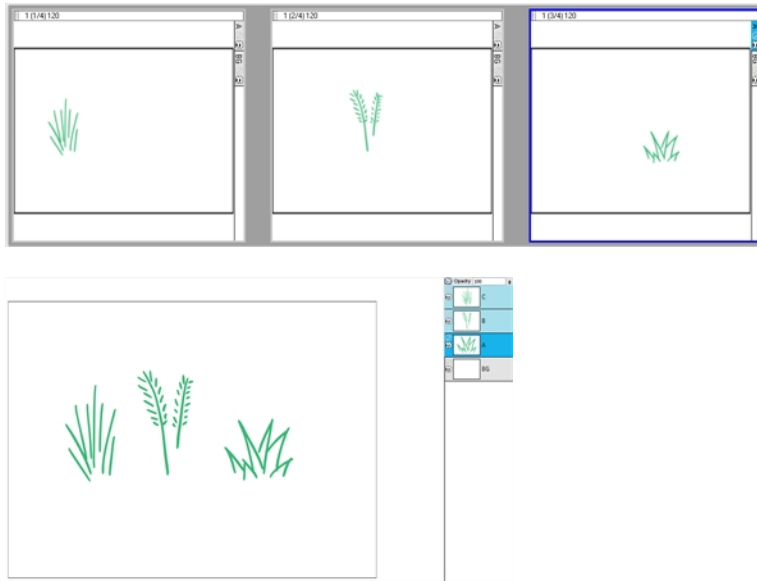
2. In the Thumbnails, Timeline, or Stage view, [Shift]+click to multiselect all the layers you want to use to create the Dynamic brush. If you are creating your brush with panels, [Ctrl]+[Shift]+click (Windows) or [⌘]+[Shift]+click (Mac OS X)) the panels to use to create the Dynamic brush.

3. Select the Brush tool and click the Add Dynamic Brush button.

4. In the Tool Properties view, adjust the slider to see the properties of the Dynamic brush.

   Your new Dynamic brush will contain all the selected drawings. When you use this brush, you will cycle through the drawings.
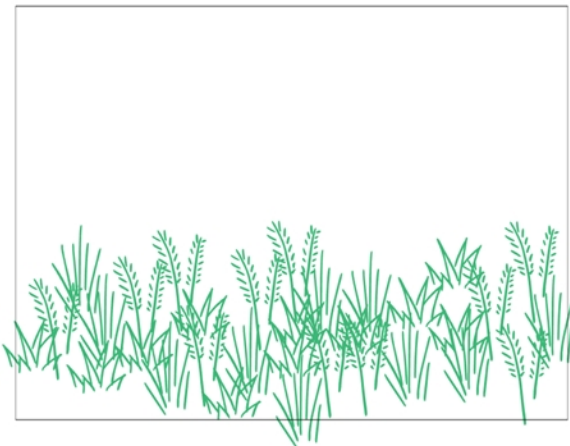
Renaming a Brush

How to rename a brush

1. In the Tool Properties view, select a brush to rename.

2. From the Brush menu, select **Rename Brush**.

3. Type in a new name for the brush and click **OK**.

Deleting a Brush

You can delete the brushes you no longer use.

To delete a brush:

1. In the Tool Properties view, select a brush to delete.

2. Do one of the following:

   ‣ Click the Delete Brush ✐ button.

   ‣ From the Brush 📄 menu, select **Delete Brush**.

Adjusting the Brush Properties

The brush properties available depend on whether you are drawing on a vector or bitmap layer. On both layers, you can set the minimum and maximum sizes of your tool, which produces the thick and thin effect on your line. This works with the pressure sensitivity of a pen tablet.

On vector layers, you can modify the central line smoothness of your line, as well as smooth the initial movement of your line. Increasing the value will result in a smoother line with fewer control points.

On bitmap layers, you can optimize the flow of lines and set the rate at which colour is applied as you draw. As you draw over an area, the amount of colour builds up based on the flow rate, up to the maximum flow rate you set.

To adjust the brush properties:

   ‣ In the Tool Properties view, click the arrow button.

Stroke preview
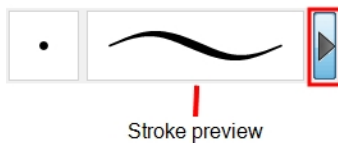
The Properties window of the Brush tool opens.

Brush properties on bitmap layer | Brush properties on vector layer

To adjust brush properties on bitmap layers:

1. Do the following:

   ‣ **Maximum/Minimum Size:** Defines the minimum and maximum width of the stroke.

   ‣ **Maximum/Minimum Flow:** Sets the rate at which colour is applied as you draw a stroke. As you draw over an area, the amount of colour builds up based on the flow rate, up to the maximum flow rate you set.

   ‣ **Spacing:** Controls the spacing between the brush marks of a stroke.

   ‣ **Hardness**: Controls the size of the brush's hard centre.

   ‣ **Select Texture**: Uses a pattern to make strokes—see *Drawing with Textured Brushes* on page 218.

   ‣ **Texture Scale**: Determines the size of the texture used in strokes.

To adjust brush properties on vector layers:

1. Do the following:

   ‣ **Maximum/Minimum Size:** Defines the minimum and maximum width of the stroke.

   ‣ **Smoothing:** Defines the number of control points added to the centre line.

   ‣ **Contour Smoothing**: Defines the number of control points added to the contour boundaries (around the line). Lower values mean that the line will appear as you draw it (with more control points added

along the centre line). Higher values mean that the line will be smoothed out (removing control points from the centre line).

‣ **Shape**: Lets you select a shape for the tip of the brush. There are a variety of brush tips to choose from: round, square, oval, star-shaped, and more.
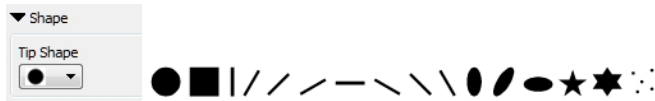
‣ **Textured Tip**: Uses a pattern to make strokes.

‣ **Hardness**: Controls the size of the brush's hard centre.

‣ **Opacity**: Sets the minimum and maximum transparency of strokes.

‣ **Select Texture**: Uses a pattern to make strokes—see *Drawing with Textured Brushes* on page 218.

‣ **Texture Scale**: Determines the size of the texture used in strokes.

Previewing the Stroke

The Preview area lets you see a preview of the stroke that will be produced after you customize the different parameters in the Tool Properties view.

1. Select a brush style from the Presets section. It's a good idea to choose a brush preset that is closest to the style you want to create.

2. Click on the Show Extended Properties arrow to display advanced customization parameters.
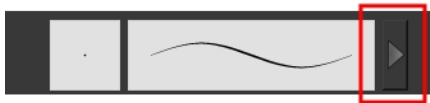
Changing the Line Texture

In Storyboard Pro, you can draw with a textured line. When drawing on vector layers, textured lines are a mixed bitmap image contained in a vector frame. This allows you to sketch as if you are drawing on paper. When drawing on bitmap layers, there is no vector frame. There is only one big rectangular canvas that you are drawing on—see *Drawing with Textured Brushes* on page 218.

Converting Brush Strokes to Pencil Lines

When drawing on vector layers, you may want to change brush strokes to pencil lines to convert contour strokes into centre line pencil strokes.

> **NOTE:** Any line thickness information is lost upon conversion from brush to pencil

To convert brush strokes to pencil lines:

1. Select the strokes you want to convert.

2. Right-click and select **Convert > Brush Strokes to Pencil Lines**.

Working with Brush Presets

Brush presets are created by saving the properties of the current brush to a new preset, which you can reuse for repeated tasks. You can create as many brush presets as you need.

To access the brush presets:

- From the Panel view, click the View ➕ menu and select **Tool Properties**.
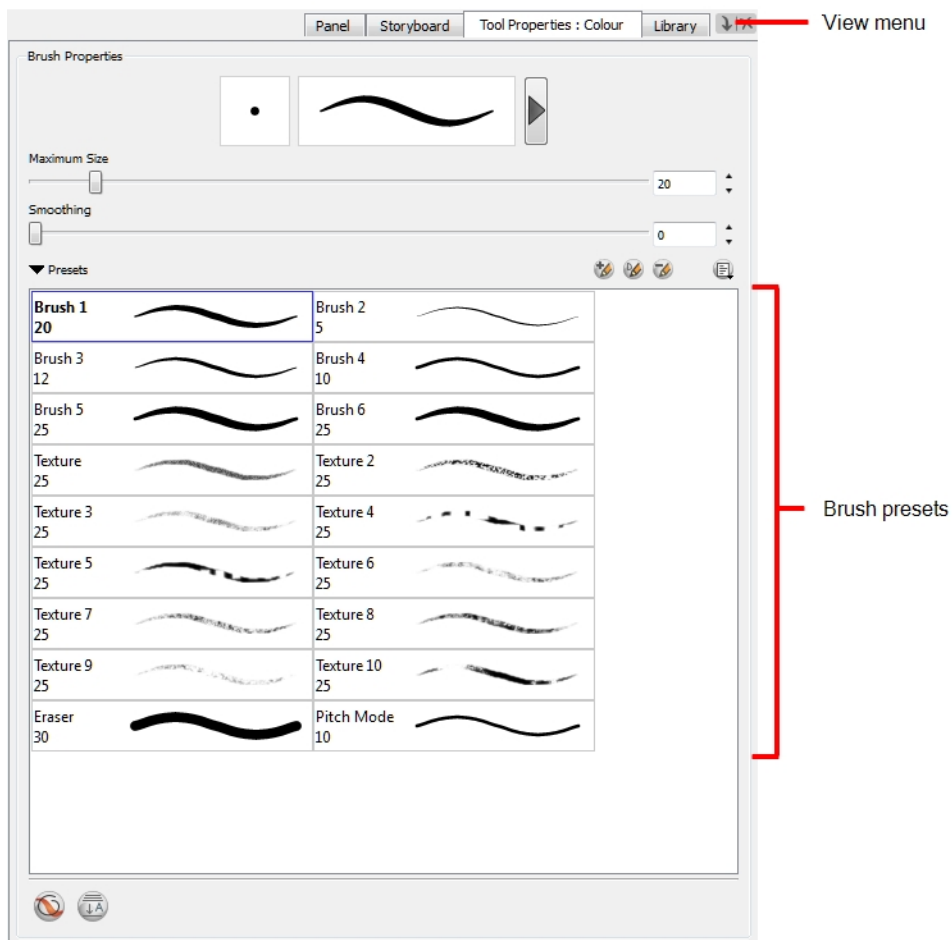
How to create a brush preset

1. Make sure your current brush has the settings you want in the preset you will create.

2. In the Tool Properties view, do one of the following:

   ‣ Click the arrow button to display the Brush Properties window and click the New Brush ✎ button in the upper-right corner.

   ‣ Click the New Brush ✎ button–see *Viewing Tool Properties* on page 180.

   ‣ From the Brush ☰ menu, select **New Brush Preset**.

3. In the New Preset window, type a name for your new brush preset.

   The new brush is added to the end of the list of brush presets.

How to delete a brush preset

1. In the Tool Properties view, select the brush preset you want to delete.

2. Do one of the following:

   ‣ Click the Delete Brush ✎ button.

   ‣ From the Brush ☰ menu , select **Delete Brush**.

Working with Tool Presets

Tool presets let you save a variety of settings and are very handy and efficient for accessing the tools you use most often. That way, the tool is already set with the desired properties, such as colour, line thickness, whether to enable Draw Behind or Auto Flatten mode, and so on. You can create presets for these tools and many more: Brush, Pencil, Eraser, Rectangle, Ellipse, and Line. First, select a tool, adjust the properties, and then create a tool preset for it. Once you have created a tool preset, you can always make adjustments to fine-tune it, as well as create a keyboard shortcut for it.

What's the difference between a tool preset and a brush preset? When you save a tool preset, you have the option of saving the colour, which you cannot do with brush presets.

The Tool Presets Toolbar

The Tool Presets toolbar lets you create new tool presets and manage them. There are four default brush presets to get you started–Rough, Clean, Shading, and Revision. By default, this toolbar is not displayed.

How to display the Tool Presets toolbar

1. Do one of the following:

   ‣ From the top menu, select **Windows > Toolbars > Tool Presets**.

   ‣ Right-click an empty area below the top menu and select **Tool Presets**.

Tool Presets toolbar
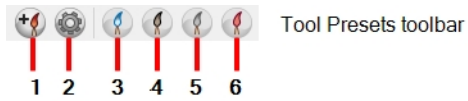
1. New Tool Preset
2. Manage Presets
3. Rough Brush
4. Clean Brush
5. Shading Brush
6. Revision Brush

Tool Presets toolbar

New Tool Preset   Manage Presets
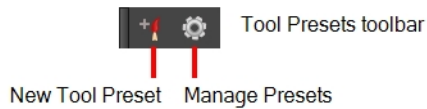
How to create a tool preset

1. In the Tools toolbar, select a tool, for example the Brush tool.

1. In the Panel view, use the Tool Properties view and/or the Brush Properties window to customize the tool.Use the Tool Properties view to customize the tool.

2. To set a specific colour for your preset, in the Colour view, select the colour swatch to link to the tool. Note that when using this preset in another scene not using that colour palette, upon selecting this new preset, a colour recovery dialog box will appear asking to add this colour to your scene.

3. In the Tool Presets toolbar, click the New Tool Preset ⁺✦ button.

4. In the New Preset dialog box, in the Name field, type a name for your new preset.
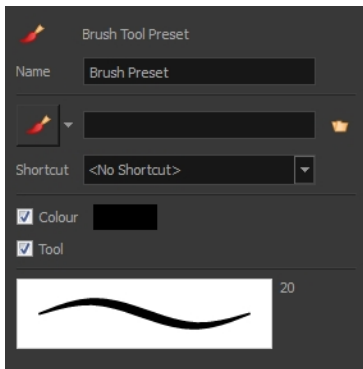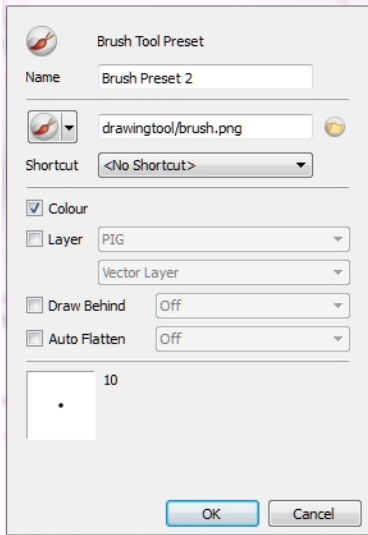
2. From the icon list, select an icon to quickly identify your preset or upload your own by clicking the File 🗁 button.
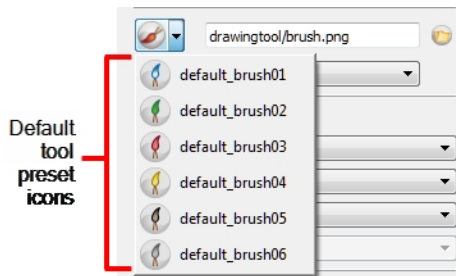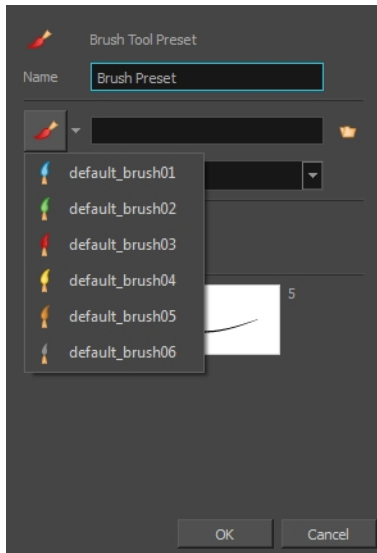
5. (Optional) From the Shortcut menu, set a keyboard shortcut to quickly access your preset. By default, the shortcuts are unassigned. To assign a keyboard shortcut, go to the top menu and select **Edit > Preferences > Shortcuts > Tool Presets** (Windows) or **Storyboard Pro > Preferences >Shortcuts > Tool Presets** (Mac OS X).

6. When you select any of the following options, they will take effect when you use the tool preset. If an option is deselected, then using a tool preset will not override your current settings.

   ▸ **Colour**: Saves the current colour into the tool preset.

   ▸ **Layer**: Lets you select a drawing layer to be used on the current panel when the tool preset is clicked. When selecting the preset, if the assigned layer exists, it will be selected, if not, it will be created. When changing panel, depending on your global navigation setting, it will look for the layer. If it does not exist, the first layer will be selected. Select the **Layer** option, assign a layer to the tool preset, and decide whether the layer is vector or bitmap–see *About Layers* on page 151*About Layers* on page 151

   ▸ If the layer already exists, then that layer is selected, and you will continue to draw on that layer. If the layer does not exist, then clicking on the preset will create that layer for you.

   ▸ **Draw Behind**: When this option is selected, saves the specified Draw Behind option to the tool preset. When deselected, the current Draw Behind status is unchanged when the tool preset is clicked–see *Changing the Brush Mode* on page 195.

   ▸ **Auto Flatten**: When this option is selected, saves the specified Auto-Flatten state to the tool preset. When deselected, the current Auto-Flatten state is unchanged when the tool preset is clicked–see *Changing the Brush Mode* on page 195.

   ▸ **Tool**: If you disable this option, only the colour will be associated. You could, for example, set three different colours with shortcuts not associated with any tool. The colour preset would then work on any selected tool. Selecting the brush tool was only a vehicle to get into the New Tool Preset dialog box.

7. Click **OK**.

How to select a tool preset

   ▸ In the Tool Presets toolbar, click the tool preset icon you assigned when creating the preset. Note that when using this preset in a new scene not using the assigned colour swatch, a colour recovery dialog box appears prompting you to add the colour to the scene.

How to delete a tool preset

1. In the Tool Presets toolbar, click the Manage Tool Presets ⊚ button.
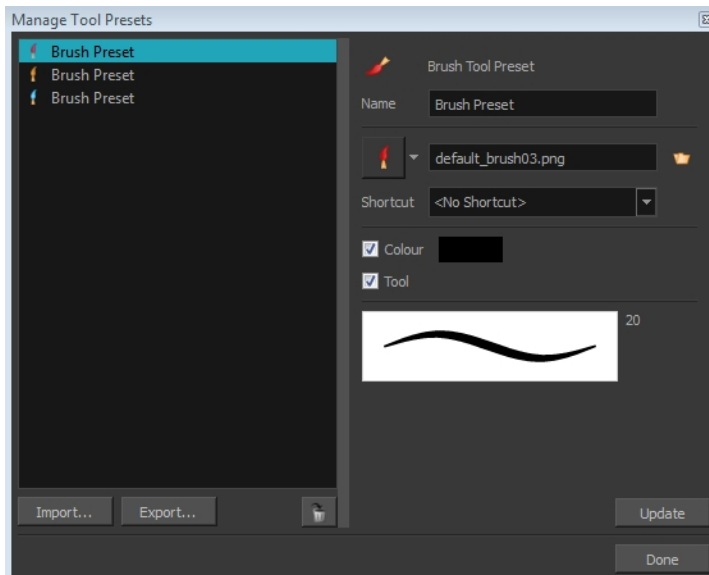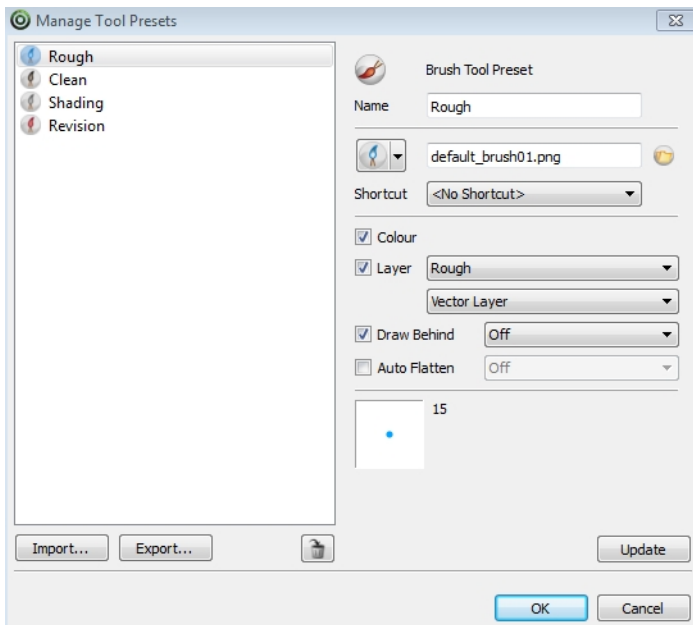
2. From the list of tool presets on the left, select a preset to delete and click the Trash icon.

How to import a tool preset

1. In the Tool Presets toolbar, click the Manage Tool Presets ⊚ button.

   The Manage Tool Presets dialog box opens.

3. Click **Import**.

4. In the Import Brush Presets window that opens, locate and select the preset(s) to import and click **Open**.In the Select Folder window that opens, locate and select the preset(s) to import and click **Select Folder**.

How to export a tool preset

1. In the Tool Presets toolbar, click the Manage Tool Presets ⚙ button.

   The Manage Tool Presets dialog box opens.

5. Click **Export**.

2. In the Export Brush Presets window that opens, select the preset(s) to export and click **Export**.

6. Give the exported preset(s) a name and click **Save**.Select a folder and click **Select Folder**.

How to update a tool preset

1. Adjust the current settings for the tool preset you want to update.

2. In the Tool Presets toolbar, click the Manage Tool Presets ⚙ button.

3. In the Manage Tool Presets dialog box that opens, select the tool preset from the Brush list on the left side of the dialog box.

4. In the Import Brush Presets window that opens, select the preset(s) to update and click **Open**.

5. Click **Update**.

   The current brush properties are applied to the brush preset you updated, as well as any changes to the settings in the Manage Tool Presets dialog box.

How to update a tool preset

1. To update the colour of your preset, you must first select it in the Colour view.

2. In the Tool Presets toolbar, click the Manage Tool Presets ⚙ button.

3. In the Manage Tool Presets dialog box that opens, select the tool preset from the left side of the dialog box.

4. Make any changes you would like to the preset.

5. Click **Update**.

Assigning Keyboard Shortcuts to Tool Presets

Assigning a keyboard shortcut to tool presets lets you quickly access them—see *Customizing a Keyboard Shortcut* on page 92.

Preventing the Selection of a Random Layer with a Tool Preset

When using presets, it is possible to assign a layer so a tool specifically draws on that layer. When the preset is

selected, it will verify if the layer exists. If so, the layer will be selected and if not, it will be created. When changing panel, depending on your global navigation setting, the normal behaviour is that Storyboard Pro name will look for the same layer and if it does not exists, it will select the first layer available. To prevent Storyboard Pro to select a random layer and not have it select any layer, you can enable the **Enable Brush Preset Layer Selection Lock** preference. This way, you will avoid to draw your artwork on the wrong layer and your project will remain even cleaner and organized.

To assign a layer to a tool preset:

1. Open the Preferences dialog box:

    ‣ **Windows**: Select **Edit > Preferences** or press [Ctrl] + [U].

    ‣ **Mac OS X**: Select **Storyboard Pro > Preferences** or press[⌘] + [,].

2. Select the **General** tab.

3. In the Layers section, select the **Enable Brush Preset Layer Selection Lock** option.
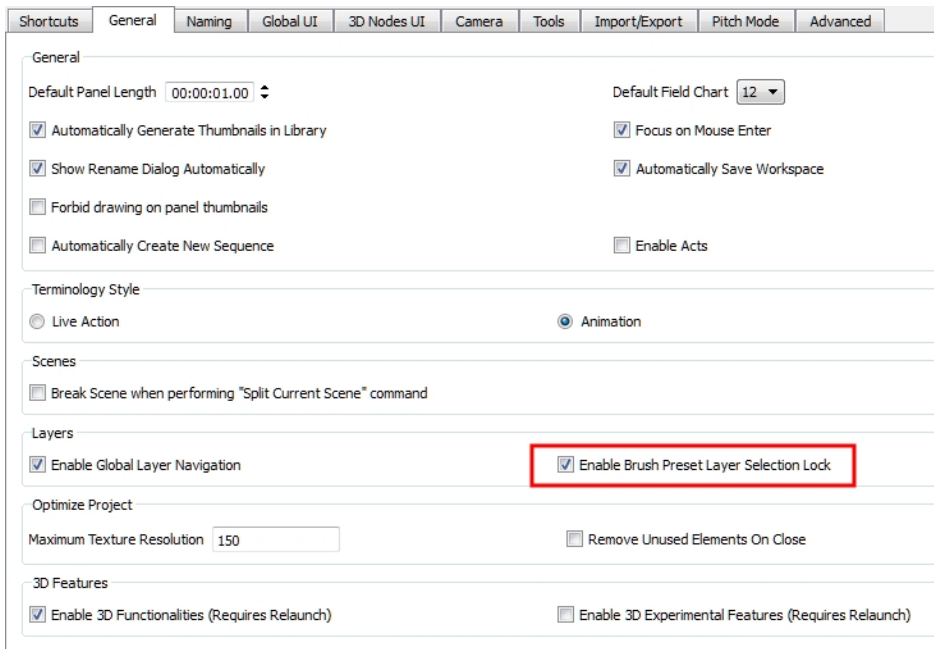
Drawing with the Pencil Tool
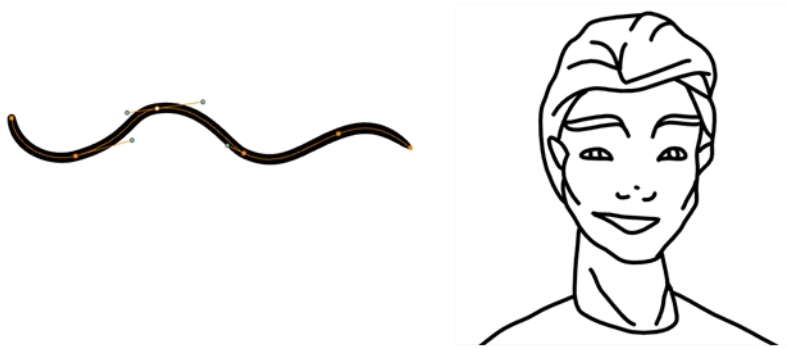
The Pencil tool is used to draw and sketch on vector layers.

The Pencil tools support pressure sensitivity, allowing you to create lines with variable thickness, producing central vector lines of constant or variable width, making a clean line. This means that a pencil line's control points (used to deform its shape) are located along the length of the central spine. The Pencil tool is very useful for tracing, clean or final drawings.

You can customize pencils, controlling the line's colour, size, smoothness, and the minimum and maximum width.

Storyboard Pro allows you to sketch your drawings, forcing disconnected lines to come together automatically, forming a single line from multiple strokes! Once you draw your lines, you can even change sections of them by increasing their thickness or adding joints.

A variety of pencil styles are provided allowing you to create and save your own. This way you can create pencils with precise sizes and parameters and save them.

To select a pencil style:

- In the Tool Properties, select a pencil style from the Presets section.
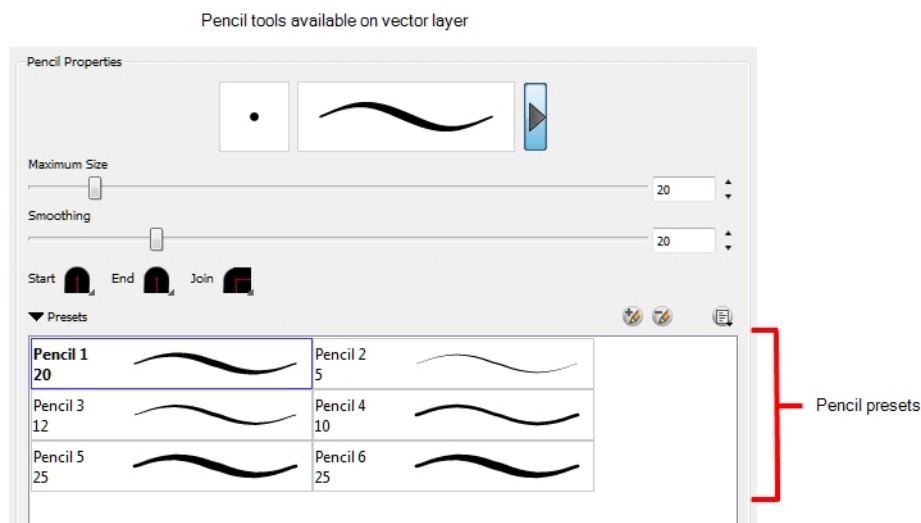
To draw with the Pencil tool:

1. In the Thumbnails or Timeline view, select the panel on which you want to draw.
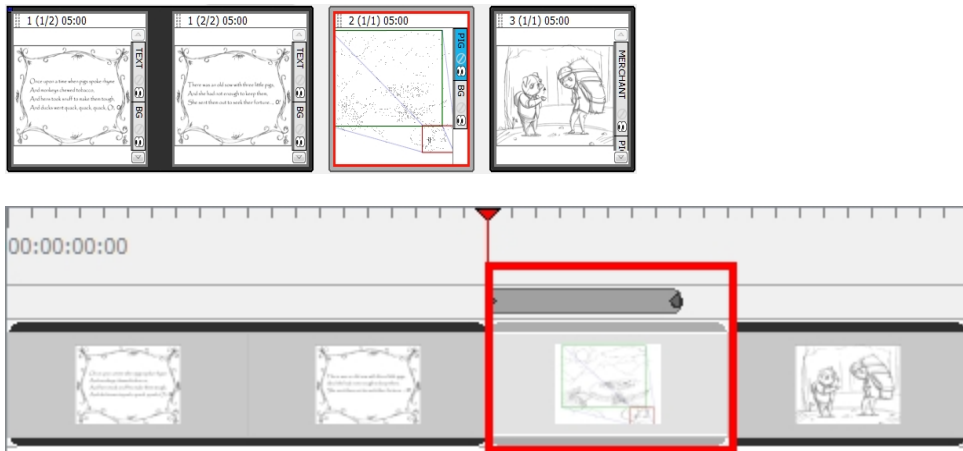
2. In the Thumbnails or the Stage View, select a vector layer to draw on.
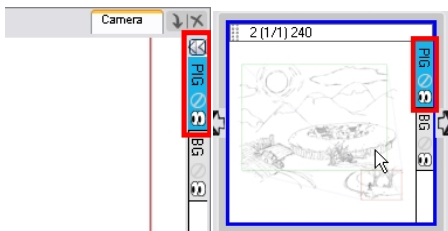
3. In the Tools toolbar, select the Pencil ✐ tool or press [Alt]+[9].

4. You can change the current colour by adjusting the sliders in the Colour view, or click a swatch to use that colour. To add colour swatches—see *Adding a Colour Swatch* on page 296.
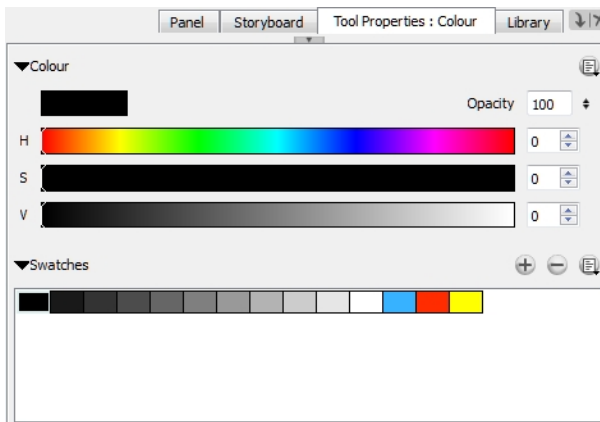
5. In the Stage view, start drawing.

   ‣ Hold [Alt] to draw a straight line.
   ‣ Hold [Ctrl] (Windows) or [⌘] (Mac OS XMac OS X) to force a line to join the end and start and end of the stroke your shape while drawing.
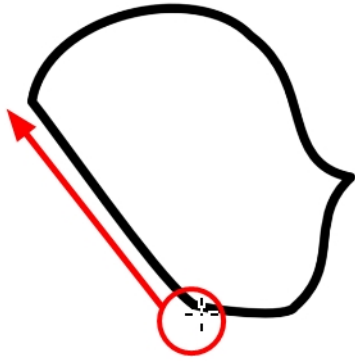
Changing the Properties of the Pencil Line

When you select the Pencil tool, its properties and options appear in the Tool Properties view. You can use these properties to change the size of the pencil line, define how the line size responds to pressure on the stylus, how the line acts in relation to other lines in the scene, and how to modify the line's direction and size after it has been drawn.
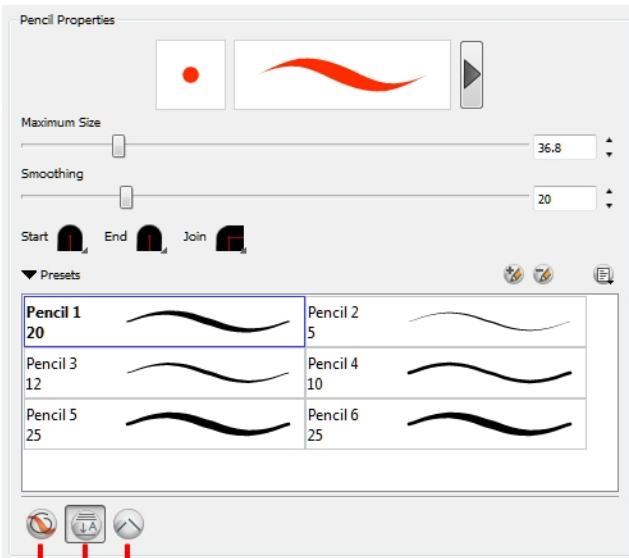
1. Draw Behind
2. Auto Fill
3. Auto Close Gap

Draw Behind

When drawing on vector layers, the Draw Behind 🔧 mode lets you paint behind existing art. By default, strokes appear over your work until you release the tool. If you want a live preview of your stroke in draw behind mode, you must activate the Realistic Preview option.

To activate Realistic Preview:

‣ From the top menu, select **View > Realistic Preview**.

📾 Auto Flatten Mode

When drawing on vector layers, lines do not usually become one object. The Auto-Flatten 📾 mode automatically merges lines created with the existing ones into one single object as you draw.

When drawing on a bitmap layer, you are laying down the bare pixels, so they are always flattened. You can no longer access the individual stroke after you draw it.

> **NOTE:**
> Using the Select tool, you can use select and remove a segment of flattened pencil lines. Overlapping pencil lines drawn with the Auto-Flatten mode enabled are essentially cut into segments by the overlap and can therefore be treated as individual lines.

Middle mouse
button drag

🔺 Auto Close Gap

Auto Close Gap off   Auto Close Gap on

When using the pencil tool, you can automatically close strokes with an invisible stroke.

It is recommended to keep this option enabled when drawing with the Pencil tool.

A variety of pencil styles are provided allowing you to create and save your own. This way you can create pencils with precise sizes and parameters and save them.

To select a pencil style:

• In the Tool Properties, select a pencil style from the Presets section.

Pencil tools available on vector layer
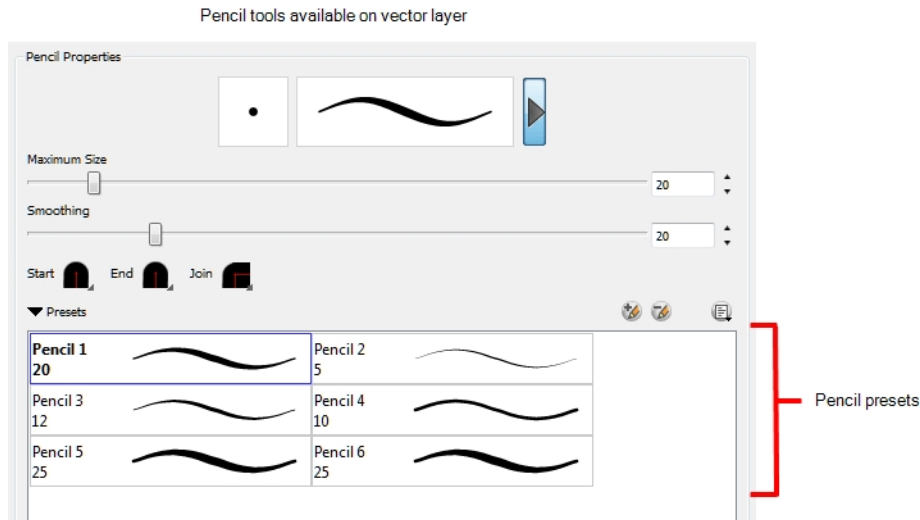
The Preview area lets you see a preview of the stroke that will be produced after you customize the different parameters in the Tool Properties view.

1. Select a brush style from the Presets section. It's a good idea to choose a brush preset that is closest to the style you want to create.

2. Click on the Show Extended Properties arrow to display advanced customization parameters.
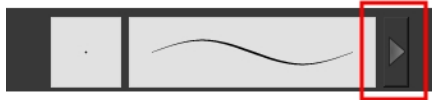
Adding a Pencil

To add a pencil:

▸ Click the Add Brush ✎ button. The new pencil style appears in the list of presets.

Renaming a Pencil

Renaming a pencil can make it easier to identify and access the pencils you use most frequently.

Brush menu

To rename a pen:

1. In the Tool Properties view, select a pencil to rename.

2. From the Brush menu, select **Rename Brush**.

3. Type in a new name for the pencil.

Deleting a Pencil

You can delete the pencils you no longer use.

Brush menu

To delete a brush:

1. In the Tool Properties view, select a pen to delete.

2. Do one of the following:

   ‣ Click the Delete Brush 🖍 button.

   ‣ From the Brush menu, select **Delete Brush**.

Adjusting the Size, Smoothness and Contour of Lines

The properties available are different depending on whether you are drawing on a vector or bitmap layer.

You can set the minimum and maximum sizes of your tool, which will produce the thick and thin effect on your line. This works with the pressure sensitivity of a pen tablet.

Also, you can optimize the smoothness of the contour of lines. You can modify the central line smoothness of your line using this option. This parameter smoothes the initial movement of your line. Increasing the value will result in a smoother line with fewer less control points.

To adjust the size, smoothness and contour of lines:

1. In the Tool Properties view, click the arrow button.

Stroke preview
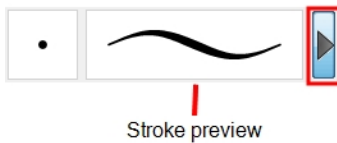
The Properties window of the tool you are using opens.
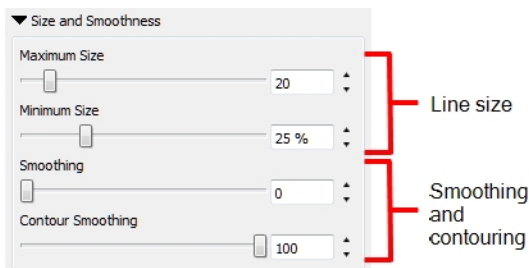
2. Do the following:

   ‣ **Maximum Size**: Defines the maximum width of the line.

   ‣ **Minimum Size**: Defines the minimum width of the line as a percentage of the maximum size.

   ‣ **Smoothing**: Defines the number of control points added to the centre line.

   ‣ **Contour Smoothing**: Defines the number of control points added to the contour boundaries (around the line).

   Lower values mean that the line will appear as you draw it (with more control points along the centre line). Higher values mean that the line will be smoothed out (removing control points from the centre line).

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Previewing the Stroke

The Preview area lets you see a preview of the stroke that will be produced after you customize the different parameters in the Tool Properties view.

1. Select a brush style from the Presets section. It's a good idea to choose a brush preset that is closest to the style you want to create.

2. Click on the Show Extended Properties arrow to display advanced customization parameters.

Changing the Line Shape

There are several line shape to choose from. You can select how the start, end, and joints in the pencil line are drawn.

To change the line shape:

In the Pencil Properties window, click a line shape in the Shape section and select a shape from the menu.
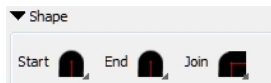
- **Start**: Make the beginning of the line round or flat.

- **End**: Make the end of the line round or flat.

- **Join:** Make joints round, mitred, or bevelled.

Drawing Invisible Lines

Using the Pencil tool, you can draw invisible lines. This can be useful to draw tones and highlights directly on the character.

To draw invisible lines:

1. Select the panel and layer on which you want to draw.

2. In the Tools toolbar, select the Pencil tool or press [Alt]+[9].

3. Select **View > Extras > Show Strokes** or press [K] to see your strokes.

4. In the Tool Properties view, set the size to **0**. You can also adjust the smoothness.

5. In the Stage view, start drawing.

6. You can modify the stroke shape with the Contour Editor ⮡ tool—see *Reshaping a Drawing Using the Contour Editor Tool* on page 229.

Converting Pencil Lines to Brush Strokes

At times, you may want to change pencil lines to brush strokes. This converts a centre line stroke to a contour line stroke. Or you can convert strokes to pencil lines.

To convert pencil lines to brush strokes:

1. Select the strokes you want to convert.

2. Right-click and **Convert > Pencil Lines to Brush Strokes**.

⮡ Modifying a Pencil Line using Control Points

Depending on how you draw your pencil line (changing the Smoothness or Contour Optimization), there may be few or many control points on the centre line. Just as you can modify a brush line, you can modify the direction of a pencil line using the Contour Editor to move its control points.
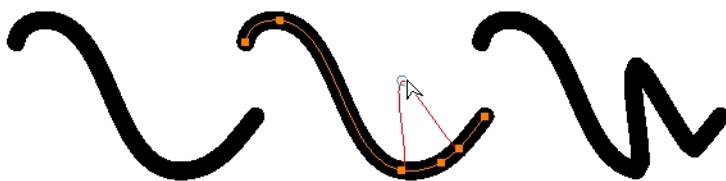
To learn how to create a pencil line with more or fewer control points, see *Reshaping a Drawing Using the Contour Editor Tool* on page 229.

To modify a pencil line using control points:

1. Using the ✏ Pencil tool, create a line that has control points along its centre line (adjust the Smoothness or Contour Optimization to set the right number of control points).

2. From the Tools toolbar, select the ⮡ Contour Editor tool and select the pencil line.

   The selected pencil line will display its centre line along and control points.
   To add control points, press [Ctrl] and click to create control points.

3. Drag any of the control points along the centre line to change the shape.

At times, you may want to change pencil lines to brush strokes. This converts a centre line stroke to a contour line stroke. Or you can convert strokes to pencil lines.

To convert pencil lines to brush strokes:

1. Select the strokes you want to convert.

2. Right-click and **Convert > Pencil Lines to Brush Strokes**.

Drawing with Textured Brushes

In Storyboard Pro, using the Brush tool, you can draw with textured lines, as well as create or select your own textures.

This section includes the following topics:

Textured Brushes on Vector Layers

When drawing with texture brushes on a vector layer, each individual stroke is still kept as a separate stroke until flattened. You can select the strokes and move them around after you draw them. Also, the colour is applied to the whole stroke.

Advantage: File sizes are light.

Disadvangage: Cannot get as artistic a look out of the drawing.

RecommendedUse: For clean drawings, sketchy vector drawings, drawings you want to reuse, and drawings you might want to use from different distances (close, mid, far), background you want to reuse.

Textured Brushes on Bitmap Layers

When drawing on a bitmap layer, you are simply laying down individual pixels on the canvas. The colour is applied on a pixel-by-pixel basis. Also, you cannot select lines after you draw them and move them around. Instead, you

work more like you would on paper, drawing then erasing.

Advantage: You have full artistic control over the drawing.

Disadvantage: It is difficult to reuse this drawing at different distances.

RecommendedUse: For drawings that incorporate a lot of texture and shading, or need that extra artistic feel.

> **NOTE:** The textured brush only works with the Brush tool. It does not work with the Pencil, Line, Ellipse or Rectangle tools.

To draw with a textured brush:

1. In the Tools toolbar, select the Brush ✎ tool or press [Alt]+[B].

2. In the Tool Properties view, select a brush and click the Arrow button to open the Brush Properties view.

3. In the Texture section, do one of the following:

   ▸ On a bitmap layer, select the **Textured Tip** option and then select the **Select Texture** option.

   ▸ On a vector layer, select the **Select Texture** option.
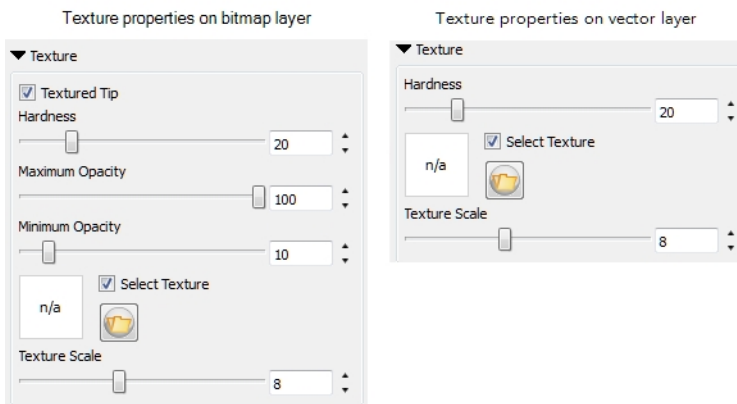
4. Set the following parameters:

   ▸ **Hardness**: The hardness value corresponds to the smoothness of the line edge. The lower the value, the more blurry and smooth the line edge will be. The higher the value, the sharper the line edge will be.

- ‣ **(Vector layers) Minimum Opacity**: This value corresponds to the transparency of the brush when the pressure is very light. Values closer to 0 produce a more transparent line.

.

- ‣ **(Vector layers) Maximum Opacity**: This value corresponds to the transparency of the brush when the pressure is heavy. Values closer to 1 produce a more opaque line.

- ‣ **Select Texture**: Lets you use and select a texture for your brush. The thumbnail displays the texture currently in use. You can also browse for a texture file to import. Browsing for a texture file in a brush already using texture will replace the file currently in use, although it will not replace the texture in the lines already drawn.

- ‣ **Texture Scale**: Changes the size of the texture in the lines you draw. If you are using a plaid texture, the squares will be larger if you increase the value and smaller if you decrease it.

5. Select the panel and layer on which you want to draw.

6. In the Stage view, start drawing.

Creating Texture Brushes

To create your own texture brush, you must prepare your tiled texture file in a third-party software, such as Adobe Photoshop. If your image has transparency in it, it will be supported. The texture file must be either a .PSD or .TGA file.

NOTE: It is recommended that you maintain your texture resolution between 100 x 100 pixels and 400 x 400 pixels.

To create a texture brush:

1. In the Tools toolbar, select the Brush ✎ tool or press [Alt]+[B].

2. In the Texture section, do one of the following:

    ▸ On a bitmap layer, select the **Textured Tip** option and then select the **Select Texture** option.
    ▸ On a vector layer, select the **Select Texture** option.

3. In the Texture section, select the **Select Texture** option.

4. Click the Folder button and browse for a bitmap texture file.
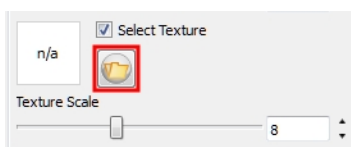
5. In the Tool Properties view, click the **New Brush** ✎ button to add a new brush to your list.

    ▸ The colour of your texture will not be used. Instead, the dark and light areas will be used to determine the alpha in your texture. The current colour swatch will be used in conjunction with the pattern and alpha in your texture.

6. In the Camera or Drawing view, draw some lines and adjust the parameters to fit the style you are looking for.

Drawing with Shapes
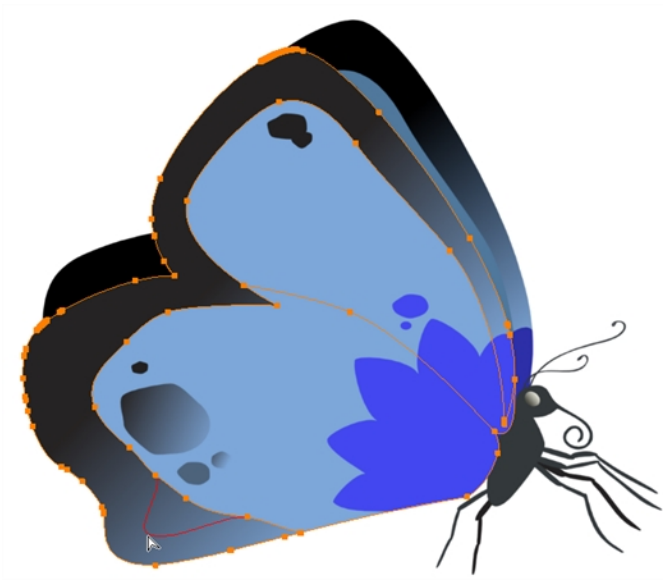
In Storyboard Pro, you can use the shape tools to draw circles, lines and squares. You can also easily reshape a square or circle into a much more complex drawing such as these butterfly wings—see Reshaping a Drawing Using the Contour Editor Tool and Reshaping Pencil Lines with the Pencil Editor Tool.

The Shape tools are used to draw rectangles, ellipses and lines. You can use them on both vector and bitmap layers. You can also easily reshape a square or circle into a much more complex drawing like these butterfly wings.

How to draw with a Shape tool

1. In the Timeline or Xsheet view, select the cell on which you want to draw.

1. In the Timeline or Thumbnails view, select the panel and layer on which you want to draw.

1. Select a drawing from the Drawing Thumbnails panel.

2. In the Tools toolbar, select a shape tool: ╱ ○ ▢ .

3. To automatically fill the shape, in the Tool Properties view, select the Auto Fill ● option.

4. In the DrawingCameraStage view, click and drag to draw the shape.
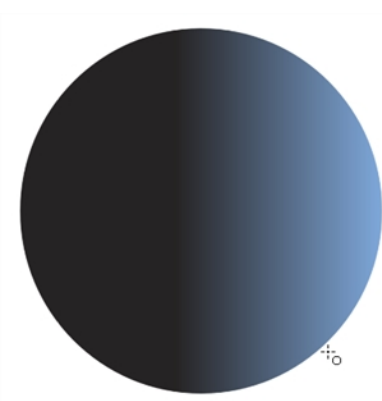
- ‣ Hold down Shift to lock the rectangle or the ellipse ratio to 1:1.
- ‣ Hold down Alt to draw the rectangle or ellipse from its centre.
- ‣ Hold down Shift to snap the line every 15 degrees.
- ‣ Hold down Alt to snap the start or end of the line to a nearby stroke.

5. Use the Contour Editor ⬚ tool to deform the shape and create your drawing.
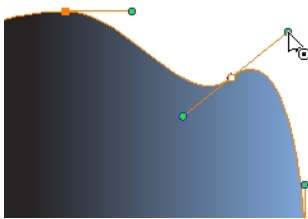
✎ Shape Tool Options

When you select the Shape tool, its properties and options appear in the Tool Properties view. The parameters that are available depend on the type of layer you are drawing on.

Rectangle tools available on vector layer

Rectangle tools available on bitmap layer
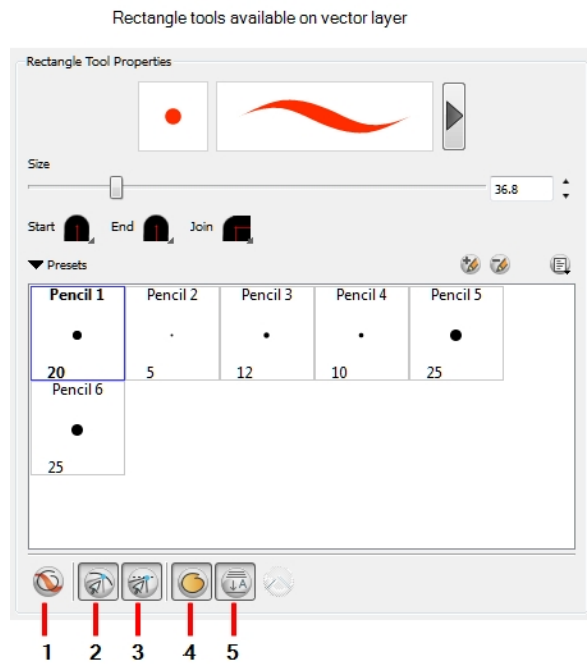
1. Draw Behind
2. Snap to Contour
3. Snap and Align
4. Auto Fill
5. Auto Flatten
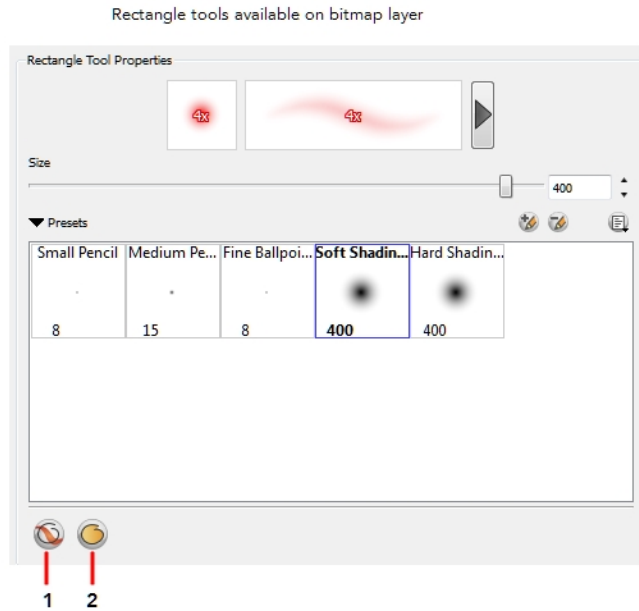
1. Draw Behind
2. Auto Fill

Line, Rectangle and Ellipse

Click on the button corresponding to the shape you want. Click and drag your mouse to draw the selected shape. The Shape tool creates centre lines.

> Using the Ellipse or Rectangle option, press [Shift] to create a perfect round or a perfect square and press [Alt] to create the shape from its centre.

> Using the Line option, press [Shift] to create a line which snaps-to every 15 degrees and then press [Alt] to connect the start or end point of that line to another nearby line.

Snapping Objects

When drawing a shape, you can snap it to any line at which you begin drawing. This helps you create place objects in your drawing with greater precision. You can also draw objects that snap to an anchor point of an existing object in your drawing.

> **NOTE:** When snapping and aligning objects, it is helpful to display the grid—see *Setting Up the Drawing Space* on page 181.

To snap objects:

1. In the Tool Properties view, click the Snap to Contour ✈ button.

2. Position the pointer near the object to which you want to snap your new shape and begin drawing.

To snap objects to the anchor point of another object:

1. In the Tool Properties view, click the Snap and Align ✈ button.

2. Position the pointer near the anchor point of the object to which you want to snap your new shape and begin drawing.

🍒 Automatically Filling Objects
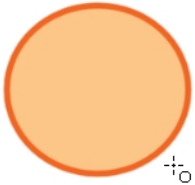
You can automatically fill a shape with a selected colour as you draw. By default the Shape tool creates the contour of an empty shape that you can later fill using the Paint tool.

To automatically fill objects:

▸ In the Tool Properties view, click the Auto Fill 🍒 button and begin drawing.

Erasing Parts of a Drawing

The Eraser tool is pressure sensitive, giving you more precision when erasing parts of a drawing.

To erase with the Eraser tool:

1. In the Thumbnails or Timeline view, select the panel where you want to erase.
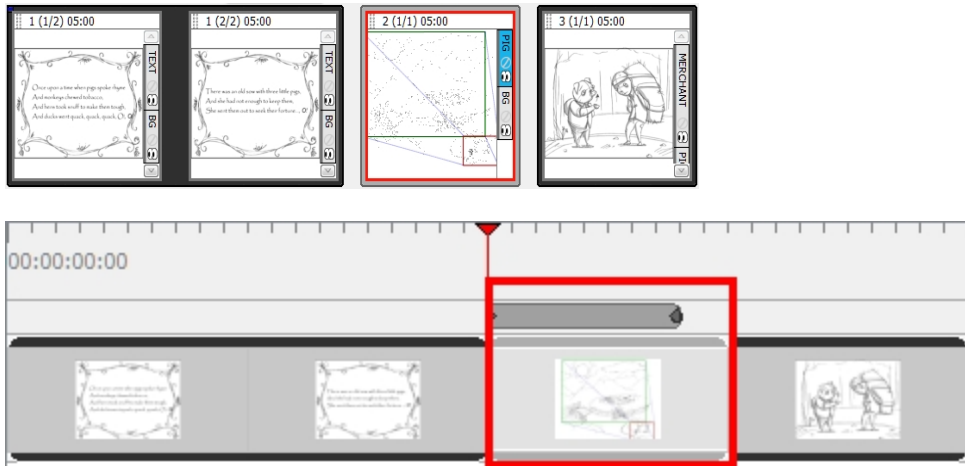
2. In the Thumbnails or Stage view, select a layer.
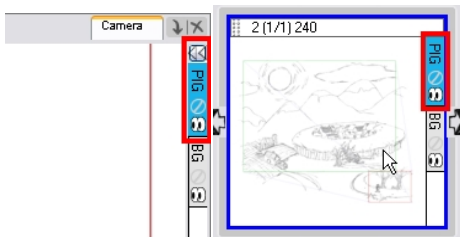
3. In the Tools toolbar, select the Eraser ![eraser] tool or press [Alt]+[E].

4. In the Stage view, start erasing.

NOTE: When working in vector, you can also use the Select tool to select drawing objects and delete them instead of erasing.

NOTE: The Cutter tool can also be used to select part of a drawing and then hit delete to erase it.

Eraser Tool Properties

When you select the Eraser tool, its properties and options appear in the Tool Properties view. The properties available are different depending on whether you are drawing on a vector or bitmap layer.

To adjust the eraser properties:

▸   In the Tool Properties view, click the arrow button.

Stroke preview
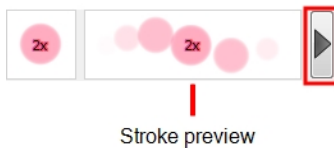
The Properties window of the Eraser tool opens.

Eraser properties on bitmap layer | Eraser properties on vector layer

To adjust eraser properties on bitmap layers:

1. Do the following:

   ‣ **Maximum/Minimum Size:** Defines the minimum and maximum width of the stroke.

   ‣ **Maximum/Minimum Flow:** Sets the rate at which colour is applied as you draw a stroke. As you draw over an area, the amount of colour builds up based on the flow rate, up to the maximum flow rate you set.

   ‣ **Spacing:** Controls the spacing between the brush marks of a stroke.

   ‣ **Hardness**: Controls the size of the brush's hard centre.

   ‣ **Select Texture**: Uses a pattern to make strokes–see *Drawing with Textured Brushes* on page 218.

   ‣ **Texture Scale**: Determines the size of the texture used in strokes.

To adjust eraser properties on vector layers:

1. Do the following:

   ‣ **Maximum/Minimum Size:** Defines the minimum and maximum width of the stroke.

   ‣ **Smoothing:** Defines the number of control points added to the centre line.

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‣ **Contour Smoothing**: Defines the number of control points added to the contour boundaries (around the line). Lower values mean that the line will appear as you draw it (with more control points added along the centre line). Higher values mean that the line will be smoothed out (removing control points from the centre line).

‣ **Tip Shape**: Lets you select a shape for the tip of the eraser. There are a variety of tips to choose from: round, square, oval, star-shaped and more.

Eraser Presets

The Eraser tool uses the same Brush presets as the Brush tool. Storyboard Pro provides a variety of eraser presets, which you can create and save. It is a good idea to create and save eraser brushes with precise sizes and parameters for drawing and design.

NOTE: If you are working on a vector layer, you can only have a solid eraser. When working on a bitmap layer, you also have texture erasers available.
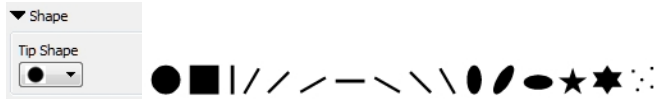
Selecting an Eraser Style

To select an eraser style:

• In the Eraser Tool Properties, select an eraser preset from the Presets section.
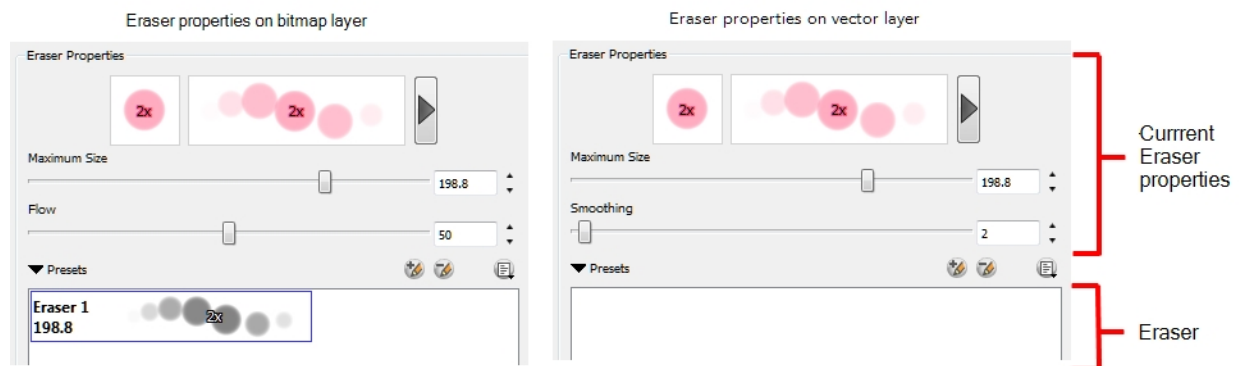
Adding an Eraser

To add an eraser style:

1. Set the properties of the Eraser tool the way you'd like the new preset to be.

2. Click the Add Brush Style 🖌 button.

   The new eraser style appears at the end of the Brush Styles drop-down menu list.

Renaming an Eraser

Renaming an eraser can make it easier to identify and access the erasers you use most frequently.

To rename an eraser:

1. In the Tool Properties view, select an eraser to rename.

2. From the Brush ![icon] menu, select **Rename Brush**.

3. Type in a new name for the eraser.

Deleting an Eraser

To delete an eraser:

1. Click the arrow button of the Brush Style menu.

2. Select the eraser you want to delete from the Brush Style list.

3. Click the Delete Brush Style ![icon] button.

Reshaping a Drawing Using the Contour Editor Tool

When drawing on vector layers, the Contour Editor Tool allows you to add, remove, or modify points on a vector line and control them with Bezier handles. It is used to correct line shapes and modify a single part of a colour zone. If a line is too thin or has a gap in it, you can modify and correct it with the Contour Editor tool. This tool can also be used to create elaborate shapes.

The Contour Editor tool is a powerful tool that allows you to add, remove or modify points on a vector line and control them with Bezier handles. It is used to correct line shapes and modify a single part of a colour zone. If a line is too thin or has a gap in it, you can modify and correct it with the Contour Editor tool. You can also use this tool to create elaborate shapes.

The Contour Editor displays vector points around a shape and the central vector points in a pencil line. Pulling or pushing on these points adjusts the brush's line thickness. Points can be selected and deleted. Each point has two Bezier handles for correcting the curves between two points. Shapes can be modified by pulling and pushing directly on the segment between the points. You can use it to perfect a central shape pencil line, a contour shape brush line, or even create an elaborate shape from a basic ellipse or square.

How to reshape with the Contour Editor tool

1. In the Timeline or Xsheet view, select the cell in which you want to draw.In the Timeline or Thumbnails view, select the cell and layer into which you want to draw.

1. Select a drawing from the Drawing Thumbnails panel.

1. In the Tools toolbar, select a shape tool: ╱ ○ ▢ .

2. In the Tool Properties view, click the Ellipse ○ button, click the Auto Fill 🔴 button and set the pencil size to **0**.

3. In the Drawing or Camera view, draw a circle.

4. In the Stage view, draw a circle.
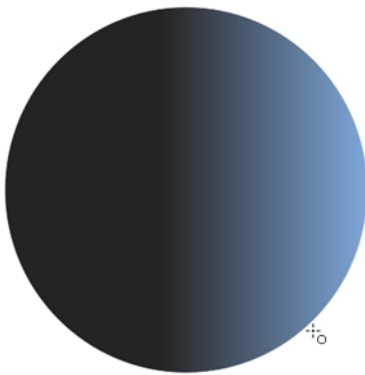
5. In the Tools toolbar, select the Contour Editor ▷ tool.

6. In the Drawing or Camera view, click the line to reshape it.

7. In the Stage view, click the line to reshape it.
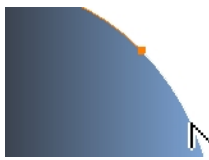
8. Select one or several points by clicking on them or circling around.
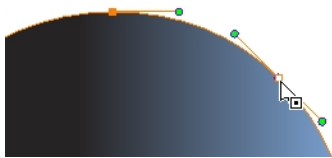
9. Press Delete to delete a selected point.

   Press Ctrl (Windows/Linux) or ⌘ (Mac OS X)and click on the contour to add a new point to adjust the contour.

10. To modify the shape, you can:

   ‣ Pull on the Bezier handle. Both point's handles will move as one.
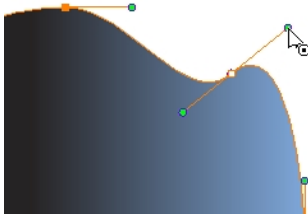
   ‣ Hold down Alt and pull on one of the Bezier handles. The point's handle will move independently from the other one.
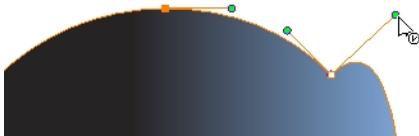
   ‣ Move the selected points to a new area.
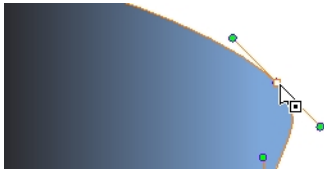
   ‣ Pull directly on the line between two points. No selection is necessary. Holding down Shift will limit the contour modification to the curve between the two first points.
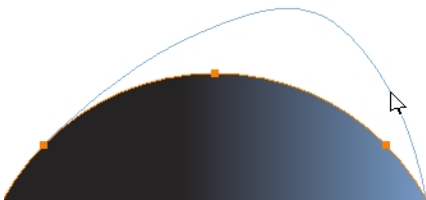
   ‣ If an anchor point has no visible Bezier handles, hold down the Alt key to display them.

   ‣ To add control points, press Ctrl (Windows/Linux) or ⌘ (Mac OS X) and click the line.

   ‣ To remove control points, select the control point and press Delete.

▷ Contour Editor Tool Properties

When you select the Contour Editor tool, its properties and options appear in the Tool Properties view.
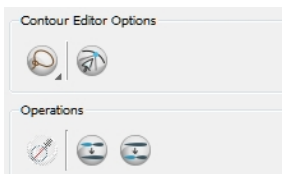
⬭ ⬚ Lasso and Marquee

Choose between the Lasso and the Marquee, to change the style of the Select tool. Click and hold [Alt] to temporarily switch from the current mode to the other.

⬈ Snap to Contour

The Snap to Contour option will snap the selected anchor point to any line you position it on.

The Snap to Contour option will snap the selected anchor point to any line you position it on.

To snap two shapes together:

1. In the Tools toolbar, select the Contour Editor ⬚ tool.

2. In the Contour Editor Tool Properties view, click the Snap to Contour ⬈ button.

3. In the Stage View, click an anchor point you want to snap to the other shape, drag it on top of the contour line area and release it.
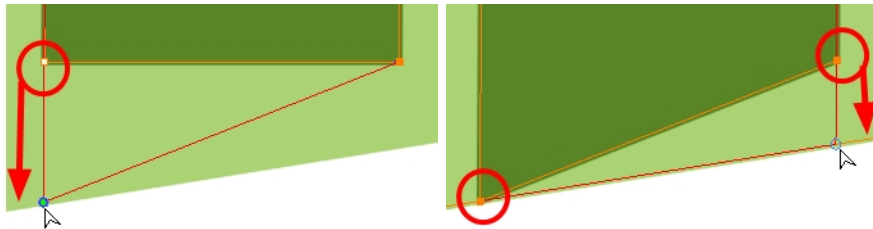
✎ Smooth Selection

The Smooth Selection operation is used to smooth out selected drawing strokes and remove extra points. Smoothing is applied to the entire stroke.

Selecting and Moving Objects
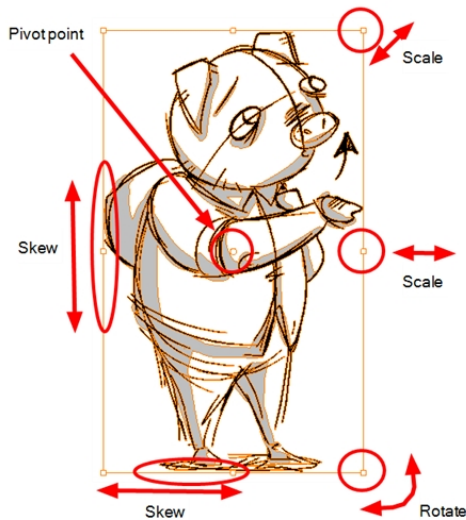
The Select tool is used to select strokes in the Stage view, and apply basic transformations such as repositioning, rotating, scaling or skewing, using the different handles of the bounding box.

When you use the Select tool and select an object such as a stroke or text, it properties are displays in the Tool Properties view in the Panel view. For example, if you have pencil selected, the pencil section displays, or if you have text selected, the text section displays.

NOTE: The Select tool, when used to scale, offset, or rotate objects, retains your selection when switching layers or panels.

To select objects:

1. In the Timeline or Thumbnails view, select the panel and layer on which you want to select objects.

2. In the Tools toolbar, click the Select ▶ tool or press [Alt]+[S].

3. In the Stage view, select an object. Select all object in the drawing by pressing [Ctrl]+[A] (Windows) or [⌘]+[A] (Mac OS X).

4. To deform or reposition a selection:

   ▸ To reposition, click the selected drawing object and drag the selection to a new area.

   ▸ Hold down the [Shift] key and move the selected object to force the bounding box to move in 15 degree increments.

   ▸ You can also nudge a selection with the Arrow keys, or with [Shift] + Arrow keys to move in larger increments

‣ To rotate the bounding box, rotate the box handle.
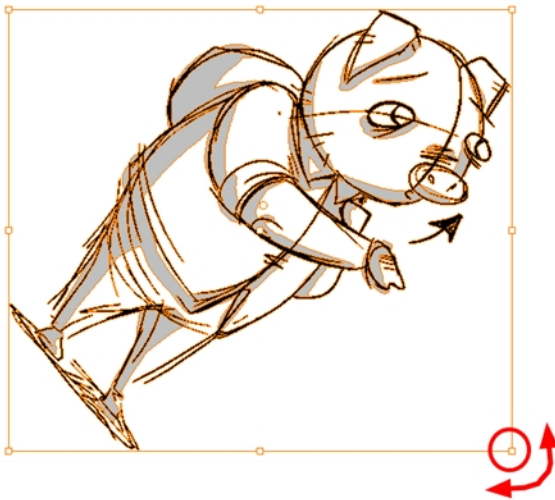
‣ To scale, pull or push either on the top, side, bottom or corner control point. Hold down the [Shift] key to lock the selection's ratio.

‣ To skew, drag sideway or up and down the sides or top and bottom segments, between the control points.
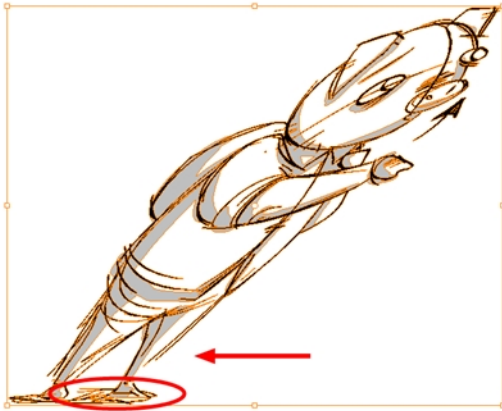
Repositioning a Pivot Point

Some of the transformations such as rotation, scale, skew and flip, are done relative to the position of the pivot point. You can temporarily reposition this pivot point for a transformation using the Select ▸ tool.

To temporarily reposition the pivot point:

1. In the Stage view, select the drawing object you want to transform.

   The pivot point appears in the middle of your selection.

2. Click on the pivot point and drag it to a new position.

   This becomes the new position of the pivot point for the current transformation and will remain there until you make a new selection.
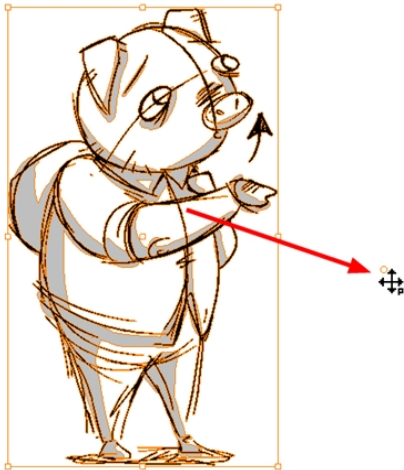
NOTE: To permanently reposition the pivot point on a drawing layer, use the Pivot Tool–see *Animating Layers* on page 373.

Select Tool Properties

When you use the Select tool, its properties and options appear in the Tool Properties view. The view changes according to what you select. For example, if you selected text, then the text properties are displayed.
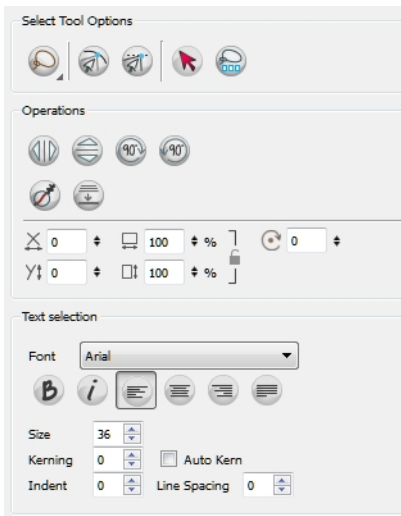
Lasso and Marquee

Choose between the Lasso and the Marquee, to change the style of the Select tool.

- Click and hold [Alt] to temporarily switch from the current mode to the other.

Snap Options

You can enable different snapping modes to help you when repositioning your drawings using the Select tool.

Snap to Contour

The Snap to Contour option will snap your selection to any line you position it on.

Snap and Align

The Snap and Align option lets you snap the selected anchor point to any existing line while displaying temporary rulers as a guide that you can also snap your anchor point to.

NOTE: Refer to the Reshaping a Drawing Using the Contour Editor Tool topic to learn more about the Snap Options utility.

Select by Colour

You can rapidly select all drawing parts painted or drawn with the colour you have selected in the Colour view.

Select All Drawings in Scene

You can select all the drawings in a scene.

Flipping Areas Horizontally and Vertically

Once you have selected areas from a drawing, you can flip them horizontally or vertically.

The Flip Horizontal and Flip Vertical operations flip the current selection Horizontally or Vertically. If no strokes are selected, the layer will be flipped. If you select more than one layer, they will all be flipped individually.

To flip an area:

1. Select the area to flip.

2. Do one of the following:

   ‣ In the tool properties, select the Flip Horizontal ⬿ or Flip Vertical ⬿ button.
   ‣ Press 4 to flip horizontally. Press 5 to flip vertically.
   ‣ Select **Tools > Transform > Flip Horizontal** or **Flip Vertical**.

Rotating Areas

Once you have selected areas from a drawing, you can rotate them by 90 degrees clockwise or counterclockwise.

To rotate an area:

1. Select the area to rotate.

2. In the tool properties, select the Rotate 90° CW ⊚ or Rotate 90° CCW ⊚ button. You can keep rotating areas at 90 degree increments by clicking the button again.

✏ Smooth
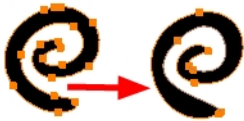
The Smooth operation is used to smooth out selected drawing strokes and remove extra points.

≡ Flatten
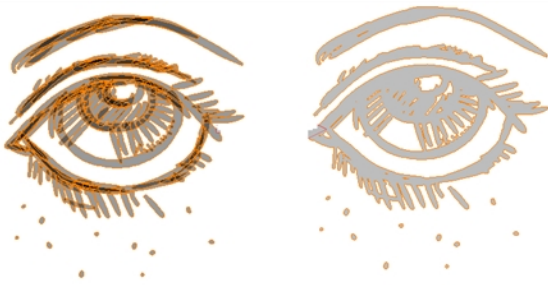
The Flatten operation is used to merge drawing objects and brush strokes into a single layer. If you draw new lines to fix a drawing or a line with many brush strokes, it can be useful to flatten them all into a single shape. By default, lines are drawn one on top of each other, if you intend repainting the lines or modifying their shape, it will be easier if they are flattened.

You can also access this option by selecting **Tools > Flatten** from the top menu or by pressing [Alt]+[Shift]+[F]. If you have selected strokes while using the flatten command, only these strokes will be flattened. If no strokes are selected, the entire current layer will be flattened. If you have selected multiple layers, they will all be flattened individually.

Pencil Selection

When working with vector layers, use the Pencil Selection field to resize the selected centre line strokes. This operation is not permitted on contour line shapes, such as brush strokes or shape fills.

Using Values to Transform Strokes

When you select strokes with the Select tool, you can offset, scale, and rotate them by entering absolute values, by using a percentage.

When using the percentage parameter, you can lock the X and Y values by clicking the Lock icon.

Selecting Text

When you select text with the Select tool, the Text tool properties are displayed at the bottom of the view.

You can also press [Ctrl]+[Shift]+[T] (Windows) or [⌘] +[Shift]+[T] (Mac OS X).
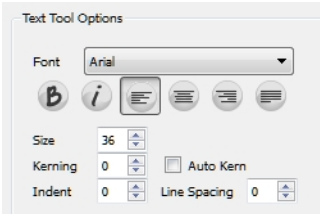
Deforming a Drawing

When drawing on vector layers, the Perspective tool is used to deform a drawing selection and alter its perspective.

NOTE: This tool cannot be used on textured brush strokes or bitmap layers.

To deform a drawing with the Perspective tool:

1. In the Tools toolbar, select the Perspective 🛆 tool.
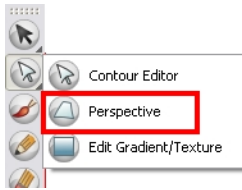
2. In the Stage view, select the drawing you want to deform.

3. Click and drag the different anchor points to deform the shape.
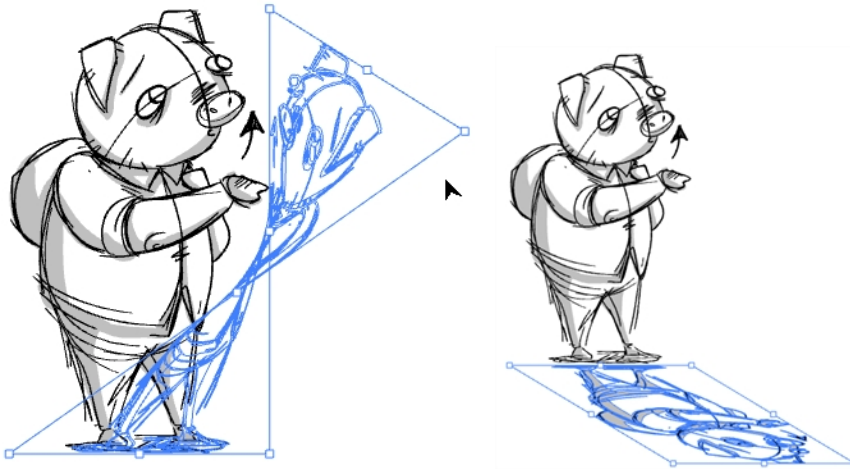
Perspective Tool Properties

When drawing on vector layers, selecting the Perspective tool displays its properties and options in the Tool Properties view.
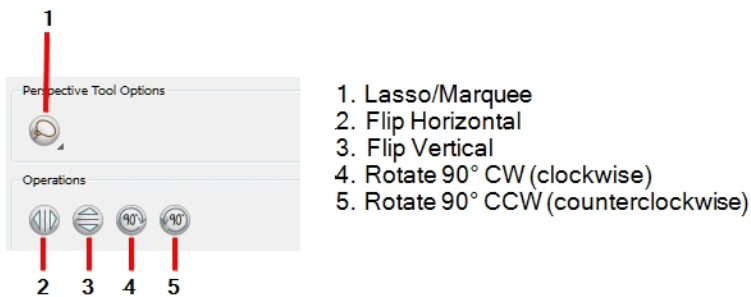
1. Lasso/Marquee
2. Flip Horizontal
3. Flip Vertical
4. Rotate 90° CW (clockwise)
5. Rotate 90° CCW (counterclockwise)

Setting the Selection Tool

When selecting areas from a drawing, you can use the Lasso to make a freehand selection or the Marquee to make a rectangular selection.

To set the selection tool:

▸   In the tool properties, select Lasso ⟲ or Marquee ⬚ mode to change the selection style of the Cutter tool. Hold down the [Alt] key to temporarily switch from the selected mode to the other.

⟨⟩ ⇕ Flipping Areas Horizontally and Vertically

Once you have selected areas from a drawing, you can flip them horizontally or vertically.

The Flip Horizontal and Flip Vertical operations flip the current selection Horizontally or Vertically. If no strokes are selected, the layer will be flipped. If you select more than one layer, they will all be flipped individually.
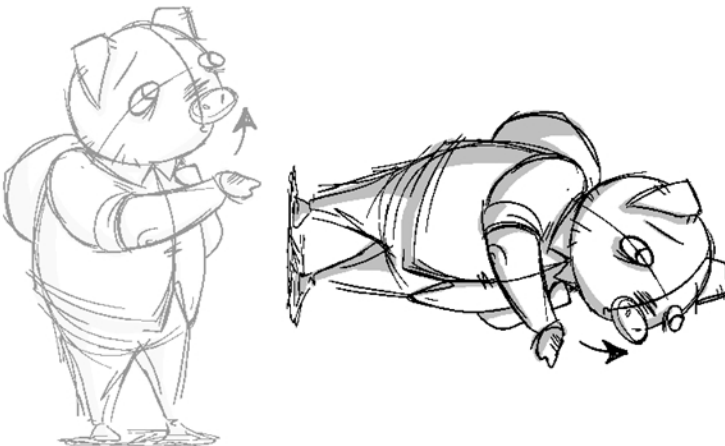
To flip an area:

1. Select the area to flip.

2. Do one of the following:

   ‣ In the tool properties, select the Flip Horizontal ⟨⟩ or Flip Vertical ⇕ button.

   ‣ Press 4 to flip horizontally. Press 5 to flip vertically.

   ‣ Select **Tools > Transform > Flip Horizontal** or **Flip Vertical**.


Rotating Areas

Once you have selected areas from a drawing, you can rotate them by 90 degrees clockwise or counterclockwise.

To rotate an area:

1. Select the area to rotate.

2. In the tool properties, select the Rotate 90° CW 🔄 or Rotate 90° CCW 🔄 button. You can keep rotating areas at 90 degree increments by clicking the button again.

Cutting Drawing Parts

The Cutter tool lets you cut a drawing area to move, copy, cut, or delete. The Cutter tool works with both bitmap and vector layers.

> **NOTE:** When you use the Cutter on a bitmap layer, the drawing will be flattened automatically on the next drawing operation after the cut.

To cut with the Cutter tool:

1. In the Tools toolbar, select the Cutter ✎ tool or press [Alt]+[T].

2. In the Stage view, trace a selection around the part to cut away.

- ‣ To delete the selected zone, press [Delete].
- ‣ To move the selection, click the selection and drag it to a new area.
- ‣ Use the bounding box controls to scale, skew, or rotate the cut piece.
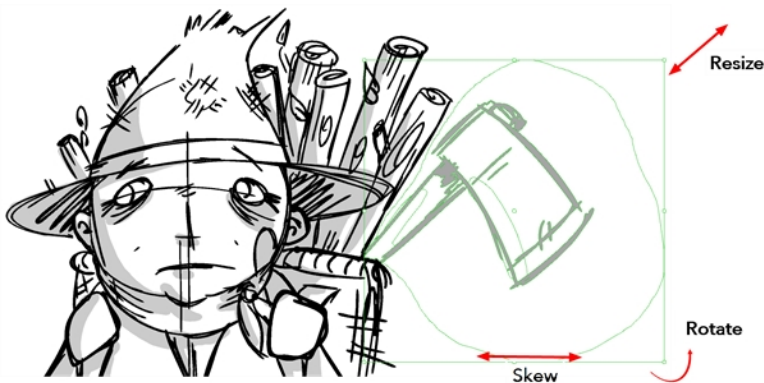
✍ Setting the Cutter Tool Properties

When you select the Cutter tool, its properties appear in the Tool Properties view.
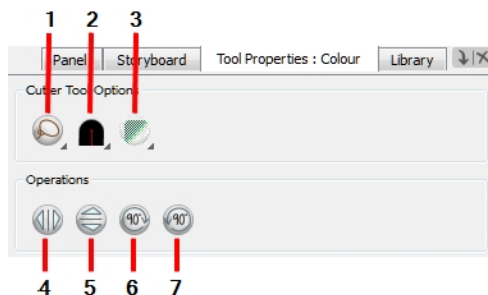
1. Lasso/Marquee
2. Tip Style
3. Antialiasing
4. Flip Horizontal
5. Flip Vertical
6. Rotate 90° CW (clockwise)
7. Rotate 90° CCW (counterclockwise)

Setting the Selection Tool

When selecting areas from a drawing, you can use the Lasso to make a freehand selection or the Marquee to make a rectangular selection.

To set the selection tool:

‣ In the tool properties, select Lasso   or Marquee   mode to change the selection style of the Cutter tool. Hold down the [Alt] key to temporarily switch from the selected mode to the other.

Changing the Tip Style

You can customize the tip of the line you cut pencil lines on a vector layer.

To set the tip style:

‣ In the Cutter tool properties, click the Tip Style button and select a style.

Setting the Antialiasing

When working with the Cutter tool on bitmap layers, you can turn antialiasing on or off. With antialiasing on, the jagged appearance of diagonal lines in bitmapped images are smoothed.

NOTE: This option is not available on vector layers.

To turn on antialiasing:

1. Select a bitmap layer.

2. In Cutter tool properties, click the Antialiasing ▰ button and select **Antialiasing On**.

Flipping Areas Horizontally and Vertically

Once you have selected areas from a drawing, you can flip them horizontally or vertically.

The Flip Horizontal and Flip Vertical operations flip the current selection Horizontally or Vertically. If no strokes are selected, the layer will be flipped. If you select more than one layer, they will all be flipped individually.
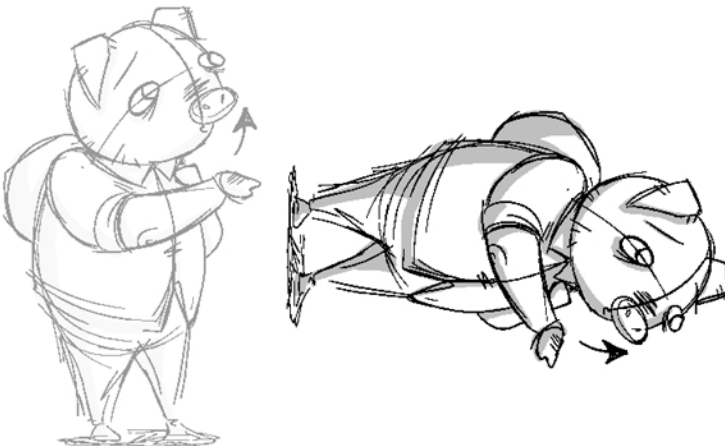
To flip an area:

1. Select the area to flip.

2. Do one of the following:

   ‣ In the tool properties, select the Flip Horizontal ◁▷ or Flip Vertical ⇕ button.

   ‣ Press 4 to flip horizontally. Press 5 to flip vertically.

   ‣ Select **Tools > Transform > Flip Horizontal** or **Flip Vertical**.

Rotating Areas

Once you have selected areas from a drawing, you can rotate them by 90 degrees clockwise or counterclockwise.

To rotate an area:

1. Select the area to rotate.

2. In the tool properties, select the Rotate 90° CW or Rotate 90° CCW button. You can keep rotating areas at 90 degree increments by clicking the button again.

Working with Text

With the Text tool, you can type text in your project, using various fonts and texts attributes. Text objects are part of a drawing, so you can manipulate them the same way. You can use the Text tools on both vector and bitmap layers.

This section includes the following topics:

Creating Text

To add text to drawings:

1. In the Tools toolbar, select the Text ⊤ tool, press [Ctrl]+[Shift]+[T] (Windows) or [⌘] +[Shift]+[T] (Mac OS X) or select **Tools > Text**.

2. In the Timeline or Thumbnails view, select the panel and layer that contains the drawing on which you want to add text.

3. In the Stage view, click the location at which you want to add text.

4. You can use the Text properties in the Tool Properties view to select the font, font size and format of the text you will type—see *Formatting Text* on page 249.

5. Type in the desired text.
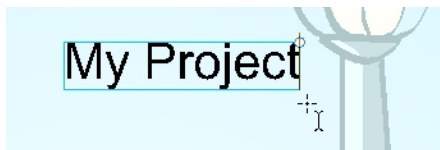
6. Click outside the text box to exit the typing mode.

   ‣ If you want to create another text object, click outside the currently active text box. You can always return to edit the text by selecting the Text ⊤ tool and clicking in the text.

Formatting Text

Use the Text Tool Properties view to select the font type and other formatting options you want to apply to the text.
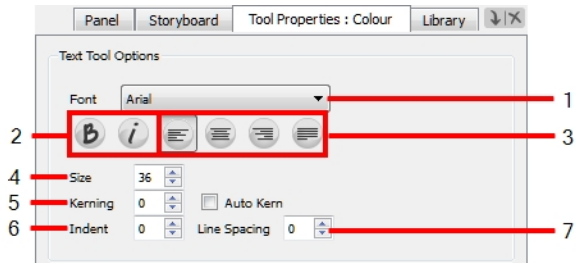
1. Font type
2. Font style
3. Alignment
4. Font size
5. Kerning
6. Indentation
7. Line Spacing

NOTE: If the text is already written, use the Text tool to select the text you want to format.
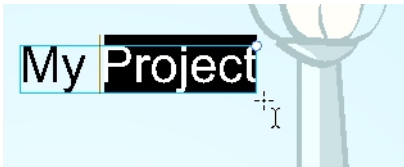
Font Type

Use this drop-down menu to select the desired font, from the list of fonts available in your system.

Font Style

Use these buttons to select a desired style for your text:

- *B* **Bold**

- *i* *Italic*

Alignment

Use these buttons to align the paragraph.

Left	Centred
LOREM IPSUM DOLOR SIT AMET, CONSECTETUR ADIPISCING ELIT. AENEAN VESTIBULUM, METUS AC FERMENTUM PORTTITOR, ODIO TURPIS PORTTITOR NIBH, ID CONSEQUAT MAGNA LIGULA ET ELIT. CURABITUR SOLLICITUDIN ELIT AC LOREM MOLLIS ACC UMSAN.	LOREM IPSUM DOLOR SIT AMET, CONSECTETUR ADIPISCING ELIT. AENEAN VESTIBULUM, METUS AC FERMENTUM PORTTITOR, ODIO TURPIS PORTTITOR NIBH, ID CONSEQUAT MAGNA LIGULA ET ELIT. CURABITUR SOLLICITUDIN ELIT AC LOREM MOLLIS ACC UMSAN.
Right	Justified
LOREM IPSUM DOLOR SIT AMET, CONSECTETUR ADIPISCING ELIT. AENEAN VESTIBULUM, METUS AC FERMENTUM PORTTITOR, ODIO TURPIS PORTTITOR NIBH, ID CONSEQUAT MAGNA LIGULA ET ELIT. CURABITUR SOLLICITUDIN ELIT AC LOREM MOLLIS ACC UMSAN.	LOREM IPSUM DOLOR SIT AMET, CONSECTETUR ADIPISCING ELIT. AENEAN VESTIBULUM, METUS AC FERMENTUM PORTTITOR, ODIO TURPIS PORTTITOR NIBH, ID CONSEQUAT MAGNA LIGULA ET ELIT. CURABITUR SOLLICITUDIN ELIT AC LOREM MOLLIS ACC UMSAN.

Font Size

Type the desired size for the text in this field. You can also use the up and down arrow buttons to set the desired value.

Kerning

Use the kerning field to modify the spacing between letters and characters. You can select the Auto Kern option to set the kerning automatically, based on the font's predefined standard. A negative value decreases spacing

between each character creating a letter overlap and a positive value increases it.

Lorem ipsum dolor
sit amet, consectetur
adipiscing elit.
Aenean vestibulum,
metus ac fermentum
porttitor, odio turpis
porttitor nibh, id
consequat magna
ligula et elit.
Curabitur
sollicitudin elit ac
lorem mollis acc
umsan.

Lorem ipsum dolor sit amet,
consectetur adipiscing elit.
Aenean vestibulum, metus ac
fermentum porttitor, odio turpis
porttitor nibh, id consequat
magna ligula et elit. Curabitur
sollicitudin elit ac lorem mollis
acc umsan.

Indent

Enter a value in the Indent field to increase or decrease the indentation on the first line of your text. A positive value sets the first line of your paragraph farther to the right and a negative value sets it farther to the left.

Lorem ipsum dolor sit amet,
consectetur adipiscing elit. Aenean
vestibulum, metus ac fermentum
porttitor, odio turpis porttitor nibh, id
consequat magna ligula et elit.
Curabitur sollicitudin elit ac lorem
mollis acc umsan.

Lorem ipsum dolor sit amet,
consectetur adipiscing elit. Aenean
vestibulum, metus ac fermentum
porttitor, odio turpis porttitor nibh, id
consequat magna ligula et elit.
Curabitur sollicitudin elit ac lorem
mollis acc umsan.

Line Spacing

Enter a value in the Line Spacing field to decrease or increase the space between each line of text.

Lorem ipsum dolor sit amet,
consectetur adipiscing elit. Aenean
vestibulum, metus ac fermentum
porttitor, odio turpis porttitor nibh, id
consequat magna ligula et elit.
Curabitur sollicitudin elit ac lorem
mollis acc umsan.

Lorem ipsum dolor sit amet,

consectetur adipiscing elit. Aenean

vestibulum, metus ac fermentum

porttitor, odio turpis porttitor nibh, id

consequat magna ligula et elit.

Curabitur sollicitudin elit ac lorem

mollis acc umsan.

Resizing the Text Box

You can resize the text box by selecting your text box with the Text T tool and moving the anchor point right or left.
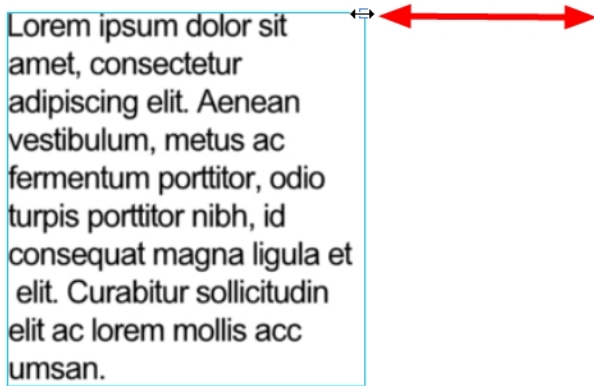
Using the Select tool will distort and scale your text itself rather than changing the width and height of your text box.

Converting Text into Separate Objects

Text contained in a text field is treated as a single drawing object. You can easily separate the text so that each character becomes an individual drawing object that you can select and modify independently.

To break a text object:

1. In the Tools toolbar, click the Select ![cursor] tool or press [Alt]+[S].

2. In the Stage View, select the text object you want to break.

3. Right-click the text and select **Convert > Break ApartText Layers**.

   Each character is now surrounded by its own bounding box that you can modify, they remain text objects that you can edit.

4. If you want to convert your independent letter to a complete vector object that you can deform, using the Select tool, select the letters to convert.

5. Right-click the text and select **Convert > Break ApartText Layers** to break the selection into a regular drawing object, with no more text attributes.

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> **NOTE:** After your text has been broken apart twice, into a regular drawing object, you can now use all the drawing tools such as the Eraser tool, on the drawing. Be aware that if you want to use the Perspective tool on the text, you should create the text on a Vector Layer before breaking it apart twice, and then you will be able to use the Perspective tool on it.

Overriding Tools

By overriding tools, you can increase productivity by rapidly switching between tools used for short tasks and your previous tool.

Most drawing tool shortcuts are accessed using the [Alt] key followed by another key, such as the Eraser tool which is accessed by pressing [Alt]+[E]. If you are drawing with the Brush tool and need to briefly switch to the Eraser before continuing, hold down the [E] key while you erase. Once done, release the [E] key to return to the previous tool, in this case, the Brush.

You can do the same for most drawing tools that have a shortcut comprised of [Alt] followed by another key.
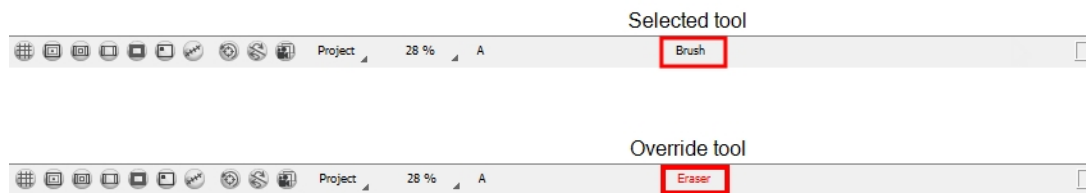
Onion Skin

With onion skinning, you can display the drawings from previous panels in the current panel, so you can see where to place the drawings for the next panel. You can also display drawings from next panels in the current panel, so you can see where to place the drawings for the previous panel. You can use these drawings as a reference to determine the size, angle or position of the drawing in the current panel.

By default, previous drawings appear in a shade of red and next drawings are displayed in green. You can change the display colours of onion skinned drawings in the Preferences dialog box (Global UI tab). *Setting the Drawing Preferences* on page 185

Next drawing   Current drawing   Previous drawing

To learn more about the Onion Skin preferences, see *Setting the Drawing Preferences* on page 185.

Accessing the Onion Skin Feature

You can access the Onion Skin feature using the Onion Skin toolbar.
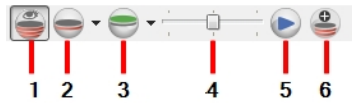
1. Onion Skin
2. Show Previous Panel
3. Show Next Panel
4. Flipbook
5. Play
6. Expand Onion Skin

To access the Onion Skin feature:

Do one of the following:

▸ In the Onion Skin toolbar, click the Onion Skin ⬱ button.

▸ Press [Alt]+[O] (Windows) or [⌘]+[Alt]+[O] (Mac OS X).

▸ Select **View > Onion Skin > Show Onion Skin**.

To set the number of previous panels:

• In the Onion Skin toolbar, click the Show Previous button and select one of the following:

▸ ⬱ **No Previous Panels**

▸ ⬱ **Previous Panel**

▸ ⬱ **Previous Two Panels**

▸ ⬱ **Previous Three Panels**

The previous panel(s) appear in the Stage view.

NOTE: You can also select these options from the top menu, **View > Onion Skin.**

To set the number of next panels:

• In the Onion Skin toolbar, click the Show Next button and select one of the following:

▸ ⬱ **No Next Panels**

▸ ⬱ **Next Drawing**

▸ ⬱ **Next Two Panels**

▸ ⬱ **Next Three Panels**

The next panel(s)appear in the Stage view.

NOTE: You can also select these options from the top menu, **View > Onion Skin.**

Onion Skin Flipbook Feature

Storyboard Pro makes use of a flipbook feature for rapidly moving between onion-skinned drawings. This is an extremely useful and time saving feature.

To view onion-skinned drawings:

In the Onion Skin toolbar, do one of the following:
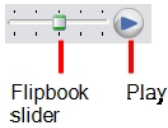
▸ Adjust the flipbook slider to flip between the drawings you selected with the Onion Skin tool.

▸ Click the Play button to automatically play the onion-skinned drawings as a flipbook.

Expand Onion Skin

You can expand your Onion Skin to show more than the default three previous and three next drawings. Using the Expand Onion Skin option, you can see some or all of the 15 previous or next drawings.

To view additional drawings:

▸ In the Onion Skin toolbar, click the Expand Onion Skin 🔵 button.

Note that the numbers you select in the Expand Onion Skin dialog box will be retained and used as the default Expand Onion Skin values.

You can set the default number of available Onion Skin levels in the Preferences dialog box (Camera tab).

Light Table

The light table is used to preview the previous and subsequent active layers in washed-out colours. It is useful to see the other layers when designing or cleaning up your storyboard.

When the light table is activated, all layers apart from the currently selected one are shown washed-out in the Stage and Camera views and when using the layer tools.

To turn on the light table:

- ‣ Select **View > Light Table**.

The drawings for the other layers are displayed as washed-out colours in the Stage view.

Chapter 7: Working in a 3D Space
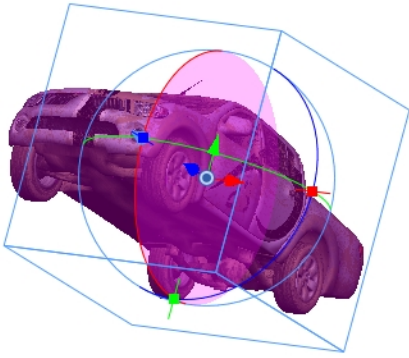
Storyboard Pro brings your animation into the third dimension by letting you import 3D objects into your scene. You can place, manipulate, and modify 3D objects and add new depth to your storytelling.

This chapter includes the following topics:

- *Creating a Multiplane Space* on page 257
- *Adding 3D Objects to the Storyboard* on page 262
- *Handling 2D Objects in 3D Space* on page 272
- *Animating the 3D Camera* on page 280

Creating a Multiplane Space

One of the most exciting features in Storyboard Pro is the multiplane or Z-depth. In the multiplane, you can create backgrounds in several layers, spread them on the Z-axis, add depth, and then move the camera through this environment to create an impressive perspective illusion. You can add backgrounds, use layered 2D drawings, or add 3D objects.

This section includes the following topics:

Viewing Objects from the Top and Side

The Top and Side views are representations of your scene's space viewed from the top and side. The views also display the viewing area that the camera can see.

When you move your element along the Z-axis, notice that it seems the object becomes smaller or larger. This is because of the perspective effect. That is, the elements closer to the camera appear larger and elements that are further away, appear smaller. Because of this, you may need to resize your elements once they are positioned.

Each element in this scene is located in a different position in 3D space, which you can clearly see in the Top and Side views.
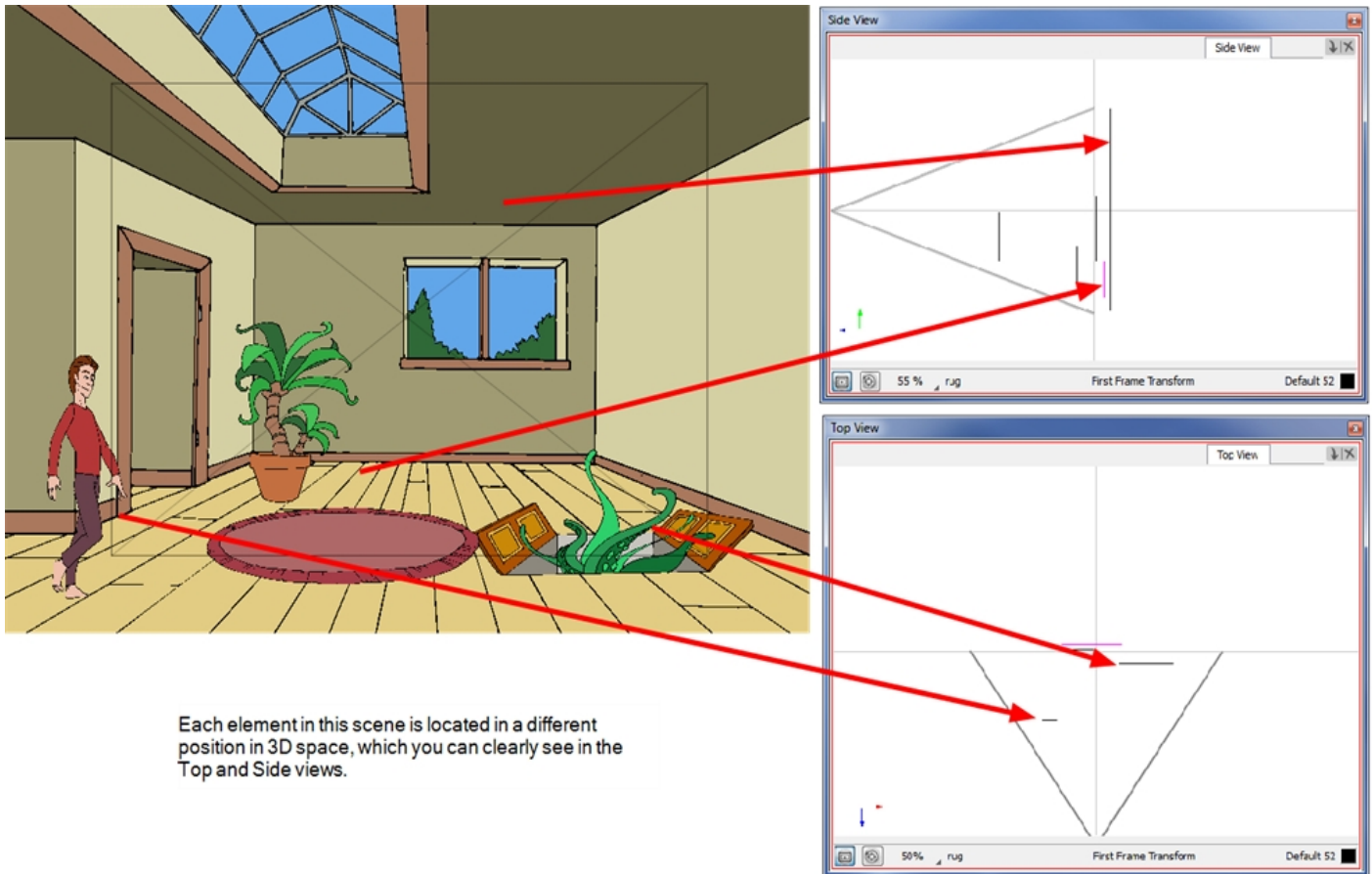
The Stage view displays the NS/EW/FB offset positions, but you can also use the Side view and Top view windows to reposition elements:

- **Top View**: Displays the EW and FB positions.

- **Side View**: Displays the NS and FB positions.

Changing an element's position affects all the contents in that element.

Because these are 2D layers in your scene, they appear as lines in the Top and Side view windows (since you are viewing them from their sides). When you import 3D objects, you will see the full 3D object in the Top and Side view windows—see _Adding 3D Objects to the Storyboard_ on page 262.

Creating a Scene in 3D space

Storyboard Pro adds a new dimension to the layout process by allowing you to plan your 2D scenes in a 3D space. The 3D space is described in terms of three planes:

- **EW**: Maps the horizontal plane in terms of East and West, this is the X coordinate.

- **NS**: Maps the vertical plane in terms of North and South, this is the Y coordinate.

- **FB**: Maps the depth of the plane in terms of Front and Back, this is the Z coordinate.

When you add elements to a scene, they appear in layers in the initial position of zero fields NS, zero fields EW, and zero fields FB within the 3D scene space. Before the 3D space feature, you could only change the layer position–see *Arranging Layers* on page 161.

But in 3D space, you can use the EW (X), NS (Y), and FB (Z) coordinates to place your elements at different distances in depth from the camera and from each other, adding a three-dimensional effect to your two-dimensional animation.
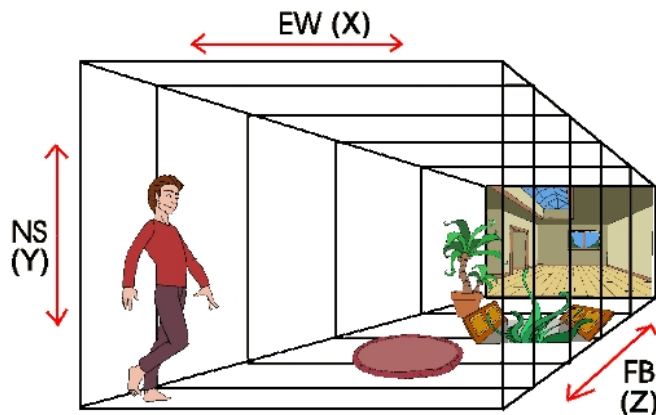
Once you place the elements in your scene, you can move, rotate, or scale your elements in 3D space. Storyboard Pro automatically applies the changes to all of the contents in the element.

Converting a Scene to 3D

By default, newly created scenes are set to the 2D mode, so your project is not encumbered with unnecessary features if you plan to work in 2D for more than a few scenes. Once your scene has been converted to 3D, you can move and rotate 2D and 3D layers in 3D space. This means that even if you do not have any 3D objects in your scene, you can still move 2D objects along the Z-axis to create a multiplane effect. A 3D scene will also allow a camera to be moved in 3D space using the Camera tool.

> **NOTE:** Converting a scene to 3D applies only to the selected scene, not the entire project.

To enable the 3D option:

1. In the Thumbnails view, select the scene you want to convert to 3D.

2. Do one of the following:

   ‣ In the Storyboard toolbar, click the Enable 3D 🔘 button.

   ‣ Select **Storyboard > Enable 3D for Current Scene**.

   ‣ Select **Edit > Preferences** (Windows) or **Storyboard Pro > Preferences** (Mac OS X). In the General tab, select **Enable 3D Functionalities**. Optionally, you can also select the **Enable 3D Experimental Features** to add the Camera Function view to the Windows menu.

NOTE: Selecting these options in the Preferences dialog box requires you to restart Storyboard Pro.

3. Drag and drop a 3D object, that you have imported into the Library, to a panel or into the Stage view—see *Adding 3D Objects to the Storyboard* on page 262.

This section includes the following topics:

- *Resetting Your Scene to 2D* on page 261
- *Positioning Elements in 3D Space* on page 261

Resetting Your Scene to 2D

Storyboard Pro lets you reset your scene to 2D. When you do so, the following happens:

- Imported 3D models are removed.
- 3D camera moves are removed.
- 2D layers that have been moved and rotated in 3D are be set back to 2D, removing those transformations.

To reset a scene to 2D, do one of the following:

‣ In the Storyboard toolbar, click the Reset Scene to 2D button.

‣ Select **Storyboard > Reset Scene to 2D**.

Positioning Elements in 3D Space

Because you will be placing these objects in 3D space, you should have the Top View and Side View windows open.

- **Top View**: Select **Windows > Top View** or right-click the tab area and select **Top View**.
- **Side View**: Select **Windows > Side View** or right-click the tab area and select **Side View**.

To position a 2D element in 3D space:

1. Open your project library and drag one or more elements into your scene. By default, the elements appear in the NS/EW/FB offset position of zero in the 3D space.

2. Click the First Frame Transformation button and select one of the elements in your scene from the Stage view.

A bounding box appears around the element and the layer appears highlighted in purple in the Top and Side views.

3. Drag and place the object in the 3D space. Use the view that will allow you to move the element to the right position:

‣ **Stage View**: Changes the EW and NS positions.

‣ **Top View**: Changes the EW and FB positions.

‣ **Side View**: Changes the NS and FB positions.

As you drag the element around in 3D space, the position of the element automatically changes in the other views.

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To animate a 2D element in the 3D space:

1. Click the First Frame Transformation 🪝 button, select one of the elements in your scene, and place it in the initial position. Use the view that allows you to move the element to the right position.

2. Click the Last Frame Transformation 🪝 button, select the same element, and place it in the final position.

3. Click the Play ▶ button to see the animation of the element as it moves from the first frame to the final frame.

The speed of the animation depends on the length of the panel, which is displayed in the Timeline view (**Windows > Timeline**)–see *Changing the Panel Duration* on page 333.

Adding 3D Objects to the Storyboard

Once you have 3D elements, you can add them to your 2D scene in Storyboard Pro by dragging them into a panel, positioning and adjusting them so they fit in the scene, and animating them so that they interact smoothly with the 2D elements.
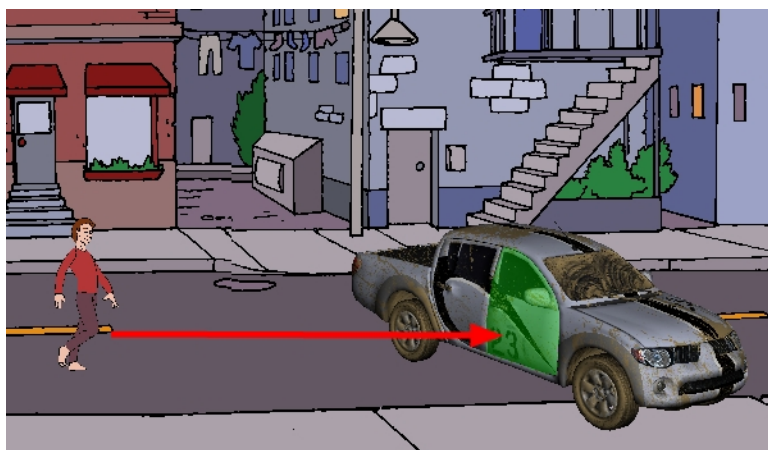
In the first frame, the 2D character is walking towards the pickup truck with its door closed.

When you export a 3D element in FBX format, the export includes any textures you applied to it, so those textures will appear in the Shaded view. When you import the 3D element in Storyboard Pro and drag it into your scene. Also, if your 3D elements have pivot points, you can manipulate the objects using pivot points–see *Modifying the Individual Nodes in the 3D Object* on page 268.

This section includes the following topics:

- *Importing 3D Objects to the Library* on page 262
- *Inserting a 3D Object in a Panel* on page 264
- *Modifying Imported 3D Objects* on page 265
- *Animating 3D Objects* on page 271

Importing 3D Objects to the Library

When creating your animated project, you can import four types of 3D files by dragging them to the Timeline view. The supported 3D file formats are: *.osb, *.3ds, *.obj and *.fbx. When you import a 3D model, it is automatically added to the Library in the 3D Models folder according to its format. You can then reuse that 3D model easily within your project file.

NOTE: It is recommended to use the .fbx format as it allows the textures to be packaged with the model.

When you import a 3D model into your library, each time you drag it into your scene, it continues to refer to the original model (it does not make a copy of the 3D model). The 3D Models library is also local to your project file, so you must import your 3D models in each project file.

Once you have imported 3D objects into your scene, you may want to change the size, position, and angle of the 3D object—see *Modifying Imported 3D Objects* on page 265.

To import a 3D object into the Library:

1. In the Library view, right-click on the 3D Models library folder, and select **Import Files**.

   The browser window opens.

2. Locate your 3D file and click **Open**.

   The selected 3D file appears in the Library view in a folder labeled according to its format (for example, OsbModels for *.osb files).

NOTE: You can preview the animation contained in the new 3D template by using the Preview section of the Library view—see *Previewing the Contents of a Template* on page 311.

3. Select the subfolder that represents the format of the model you imported. All the 3D models that match that format appear in the Library tab.

4. Drag the 3D model to the Stage view.

   The 3D model appears in its original size and is located at the zero NS/EW/FB position. The 3D model appears in all three view windows.

NOTE: When deleting a 3D model from the 3D Models folder of the Library, every instances of the model used in the project will be deleted at once. A warning message will prompt you to confirm or cancel the action.

Replacing a 3D Model in the Library

Once you have imported a 3D model in the Library, you can easily replace it with a new one using the Replace 3D Model command. This will update all instances of the model used in the project.

To replace a 3D model:

1. In the Library view, click the **3D Models** folder to display its contents.

2. From the 3D Models folder, select the model you want to replace.

3. Right-click on the selected model and select **Replace 3D Model**.

   A browser window opens.

4. In the browser, locate the 3D model file you want to replace the selected model with, and click **Open**.

The Rename Node dialog box opens.
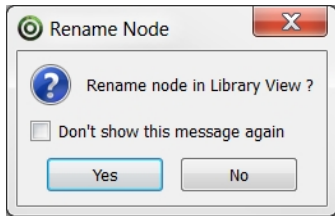
- ‣ Click **Yes** to rename the replaced model using the new model name.
- ‣ Click **No** to preserve the replaced model name.
- ‣ Enable the **Don't show this message again** check box to prevent this dialog box from opening again, and use the same behavior as you choose now for future use of the Replace 3D Model command.

The 3D model view is updated in the Library view and in your project at once.

Inserting a 3D Object in a Panel

Once you have a 3D object in your library, you can insert into a panel just like any other element: you drag it from the Library view to a panel and position it in the scene.

To insert a 3D object into a Panel:

1. In the Library view, open the 3D Models folder and then open the format folder that contains your 3D object.

2. Drag the 3D object into your panel, the Stage view, or Camera view window.

The object appears at its default size in the middle of the panel.

3. To place or modify the 3D object, use the First Frame Transformation 	⌇ or the Last Frame Transformation 	⌇ buttons.

Once you placed your 3D object in a panel, you can do any of the following:

- • Move, rotate, or transform your object—see *Modifying Imported 3D Objects* on page 265.
- • Animate the 3D Object—see *Animating 3D Objects* on page 271.
- • Display the various layers of the 3D object—see *3D Object Layer Display* on page 166.

Navigating 3D Space

Once your scene has been converted to 3D, you can rotate around your 2D and 3D objects in the Stage view using the keyboard shortcuts Once your scene has been converted to 3D, you can rotate around your 2D and 3D objects in the Stage view using the keyboard shortcuts [Ctrl]+[Shift] (Windows) or [Shift]+[⌘] (Mac OS X)[Ctrl]+[Shift] (Windows) or [Shift]+[⌘] (Mac OS X)
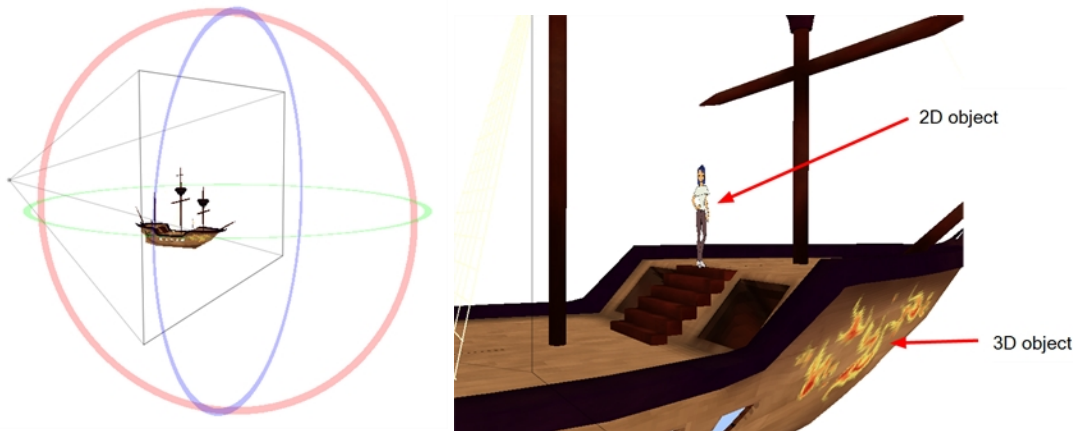
Modifying Imported 3D Objects

When you import a 3D object into a panel, you can place it in the 3D space much just as you would a 2D element by clicking directly on it and dragging it into place along the X, Y, and Z planes in the 3D space—see *Positioning Elements in 3D Space* on page 261.

When you select a 3D object in a panel, a 3D transformation bounding box appears around the object. This bounding box allows you to transform the object in any of the following ways:

- Rotating the object on a pivot point.
- Changing the dimensions of the 3D object.
- Modifying the individual nodes in the 3D object.

Once you place your 3D object in your panel, you can create some basic animation with it using the First and Last Frame feature. Being able to animate your 3D object allows you to create interaction between 2D and 3D elements.

This section includes the following topics:

Rotating a 3D Object Along a Pivot Point

The pivot point defines the size of the arc upon which you will apply the rotation to the 3D object. When the pivot point is in the centre of the object, the object rotates upon itself. But when you place the pivot point on the outside of the object, the object will rotate a larger axis with the pivot point at the centre.

Rotation along the X-axis (X-axis guideline is red)	Rotation along the Y-axis (Y-axis guideline is green)
Rotation along the Z-axis (Z-axis guideline is blue)	Resizing the 3D object (Resize guideline is purple)
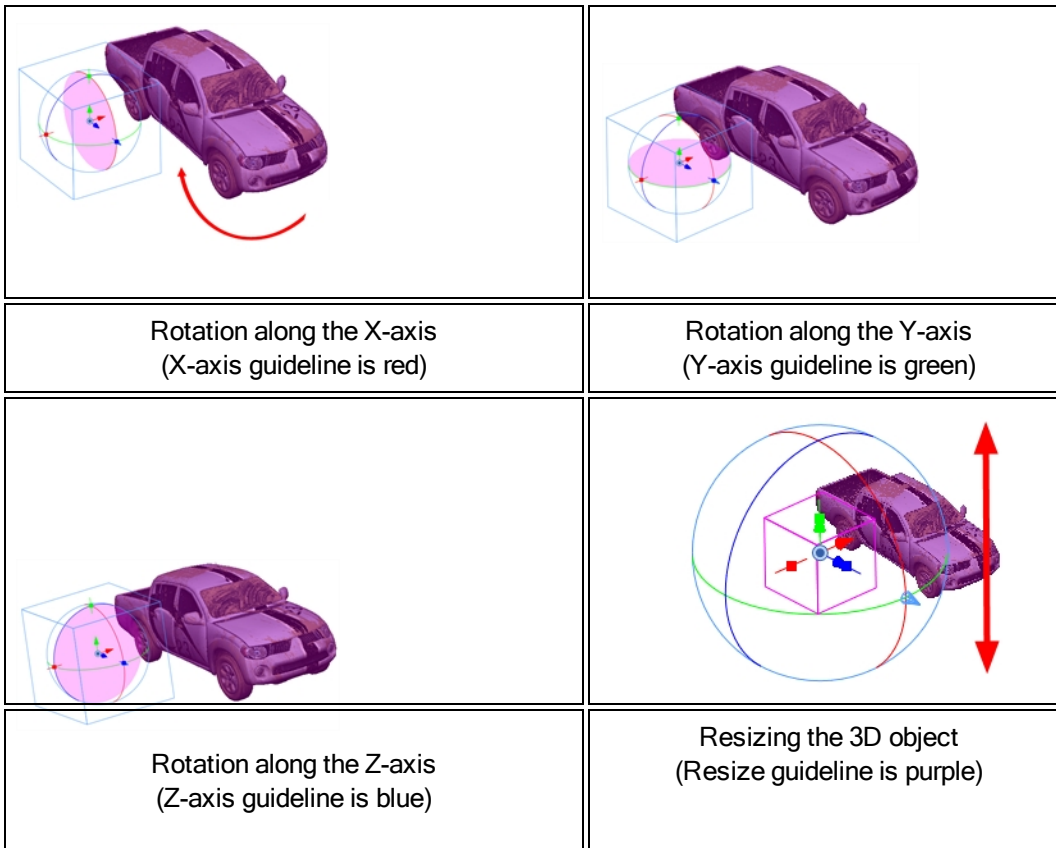
In the above examples, the pivot point was moved to the side of the object for illustrative purposes. By default, the pivot is positioned below the 3D object at its centre. Depending on the pivot point's position, the object's rotation arc will change.

To rotate a 3D element along a pivot point:

1. Click the First Frame Transformation button and select an element from your scene in the Stage view.

   A bounding box appears around the element and the layer appears highlighted in purple in the Top and Side views.

2. Drag the pivot point to the location at which you want to base the rotation.

In this example, the pivot point is at the centre of the pickup truck, so you can rotate it on the itself along the X axis.

In this example, the pivot point is off-centre, so the truck can be rotated on a larger arc along the Y axis.

Pivot point
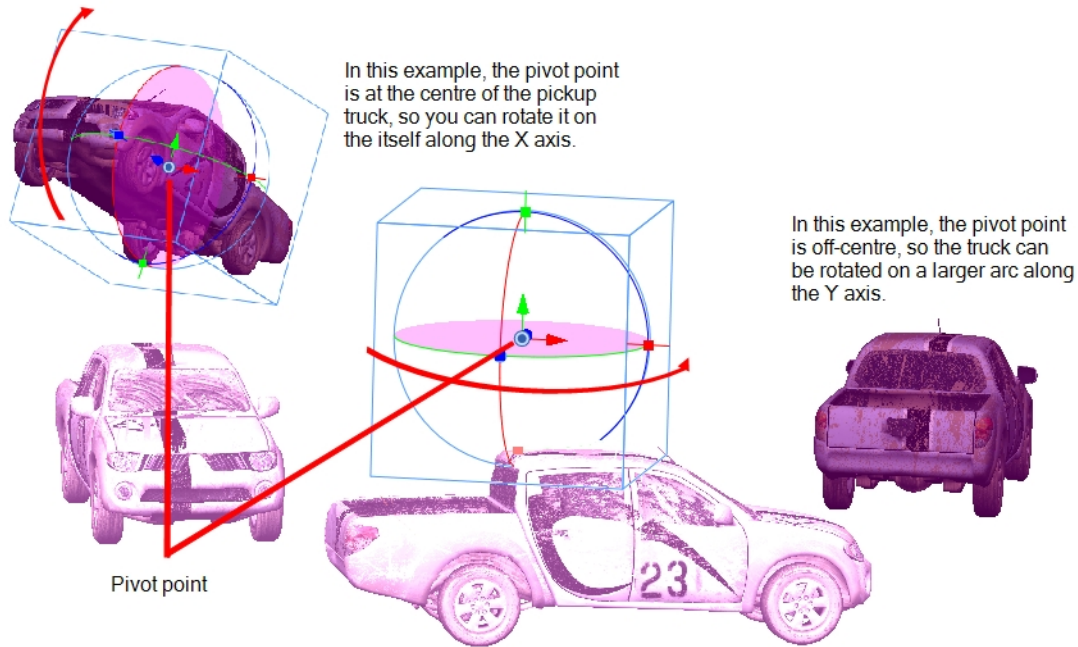
3. Using the X-axis, Y-axis, and Z-axis guiding lines, change the Yaw, Pitch, and Roll of the object.

   As you place the cursor on the guide lines, it will change to display with axis is being changed. Use the view windows to see how the object looks from the Camera, Top, and Side views.

Changing the Dimensions of the 3D Object

When you import a 3D object, it appears in its initial size and dimensions. Using the control points on the bounding box, you can change these dimensions of the object:

- Width (X-axis)
- Height (Y-axis)
- Length (Z-axis)
- Overall size (X, Y, Z axis in proportion)
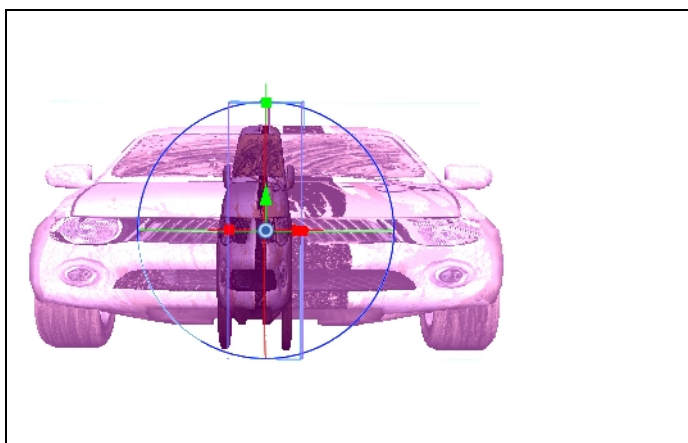
| Resizing along the X-axis (X-axis control point is red) | Resizing along the Y-axis (Y-axis control point is green) |
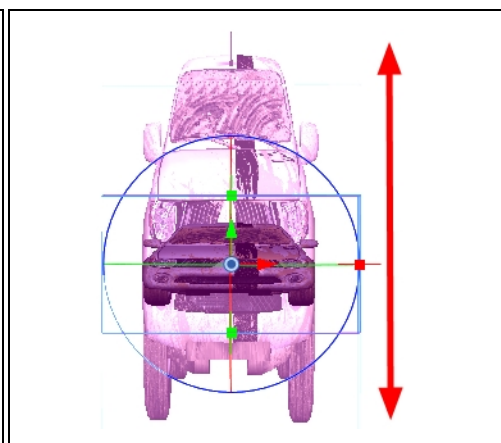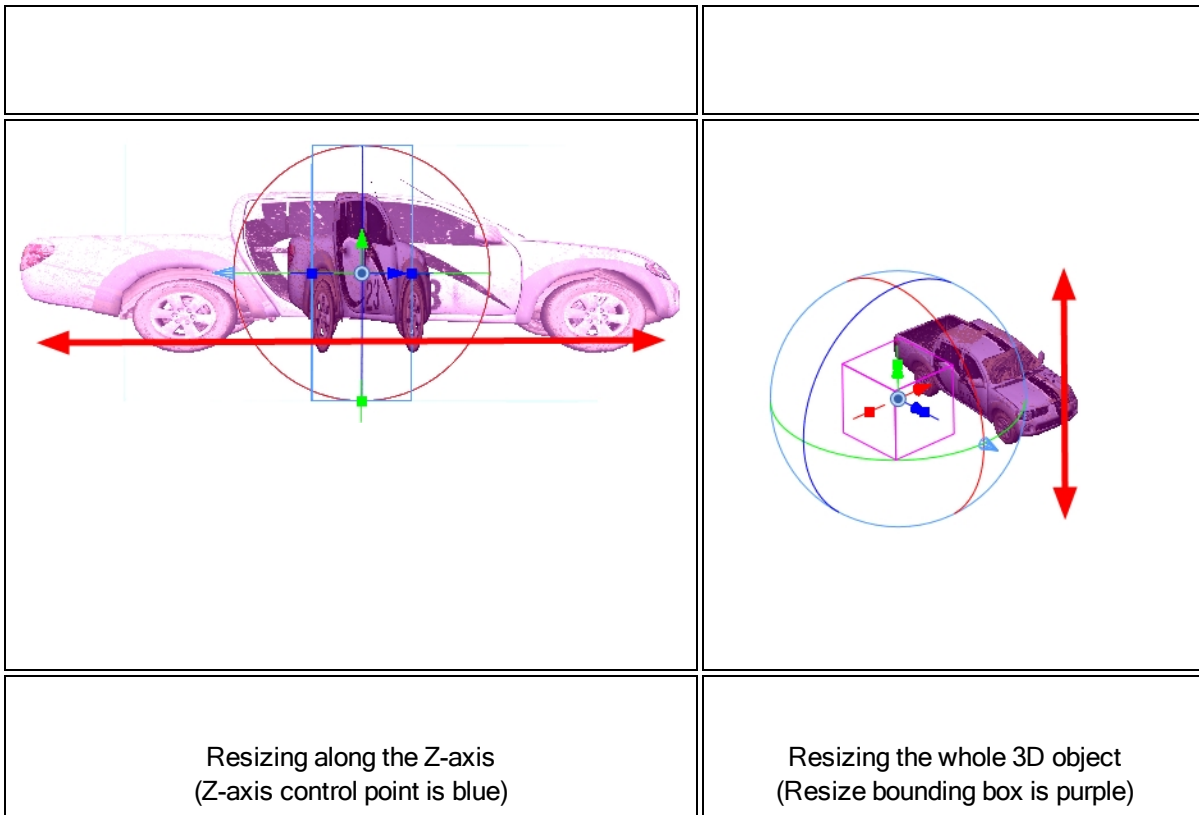
Resizing along the Z-axis (Z-axis control point is blue)	Resizing the whole 3D object (Resize bounding box is purple)

To rotate a 3D element along a pivot point:

1. Click the First Frame Transformation button and select one of the elements in your scene from the Stage view.

    A bounding box appears around the element and the layer appears highlighted in purple in the Top and Side views.

2. Drag one of the X-axis, Y-axis, and Z-axis control points to change any of the following dimensions:

    ‣ Width (X-axis)

    ‣ Height (Y-axis)

    ‣ Length (Z-axis)

    ‣ Size (X, Y, Z axes in proportion)

    Use the views to see how the object looks from the Camera, Top, and Side views.

Modifying the Individual Nodes in the 3D Object

3D objects often consist of multiple nodes or meshes that are combined to form the entire object. If you look at the pickup truck examples in this chapter, you can see that it consists of:

*   A body

*   Four wheels

*   Two wipers

Just as you can transform the object as a whole, you can also apply transformations to the individual nodes of the 3D object.

To select individual nodes in the 3D object:

1. Click the First Frame Transformation ✐ button and select one of the elements in your scene from the Stage view.

   A bounding box appears around the element and the layer appears highlighted in purple in the Top and Side views.

2. To select a node in the 3D object, select **Window > 3D Nodes**.

   The 3D Nodes window opens. You can change how the hierarchy appears in this window using the following commands:

   ▸ **Zoom In/Out**: Increases (zoom in) or decreases (zoom out) the magnification. You can also press [1] to Zoom Out or press [2] to Zoom In.

   ▸ **Reset Zoom**: Restores the magnification to its default setting.

   ▸ **Reset Pan**: Resets the 3D node tree to its default position.

   ▸ **Reset view**: Restores the 3D node tree to its default position and magnification.

   You can reposition the 3D node tree in the window by pressing the [Space bar] and dragging the cursor inside the 3D Node window.

3. Select one of the nodes of the 3D object.

   The selected node appears highlighted in green and a bounding box appears.

4. You can also select the nodes using [Ctrl]+click (Windows) or [⌘]+click (Mac OS X). To select all the nodes, right-click the 3D Nodes window and select **Select All**.
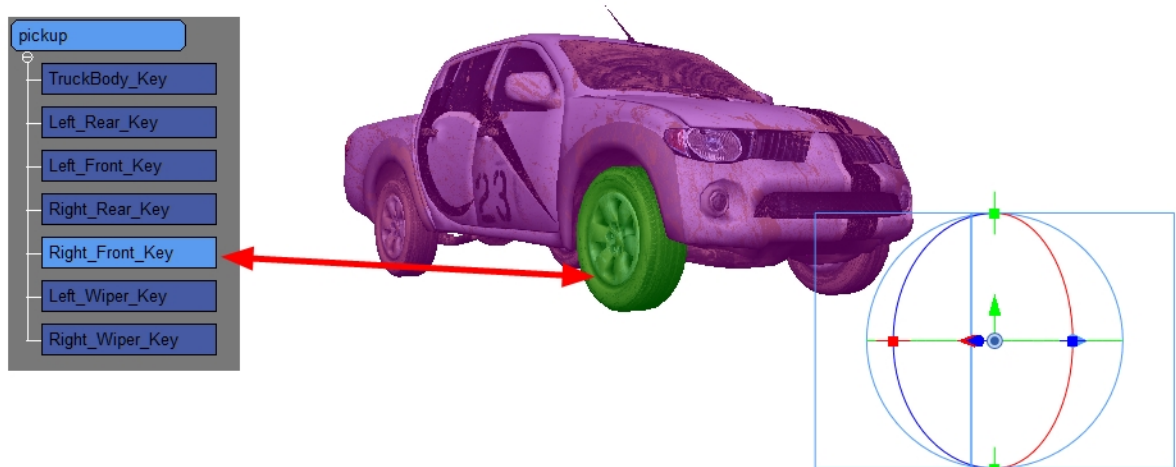
   By default, the basic node structure appears in the 3D Nodes window.

NOTE: To show or hide a detailed hierarchy that makes up the 3D element, right-click inside the 3D Node's window and select or deselect **Extended Display Mode**.

---

5. Using the bounding box, you can make the following changes to the node:

   ▸ Its position in the 3D space

   ▸ Its Yaw, Pitch, Roll rotation (use the pivot point to change the arc size)

‣ Its dimensions along the X, Y, and Z-axis

This section includes the following topics:

- *Resetting Changes to 3D Nodes* on page 270
- *Configuring the 3D Nodes Feature* on page 270

Resetting Changes to 3D Nodes

When you import a 3D element that contains 3D nodes, all these nodes are in their default position and size/proportion. You can make changes to these nodes, but if you want to reset a node to its default position (undoing all the changes you made), you can restore each node to its default settings.

To restore a node's default settings:

1. Select the node you wish to restore by [Ctrl]+clicking the node in a view window or by selecting it from the hierarchical position in the 3D Nodes window.

   If you use the 3D Nodes window, you can select multiple nodes by [Ctrl]+clicking each one.

2. Select **Layer > Reset Selected 3D Nodes**. The selected nodes return to their default settings.

Configuring the 3D Nodes Feature

You can use the 3D Nodes UI tab in the Preferences to change how the hierarchy is displayed in the 3D Nodes window.

To configure the 3D Nodes interface:

1. Select **Edit > Preferences** and select the **3D Nodes UI** tab.
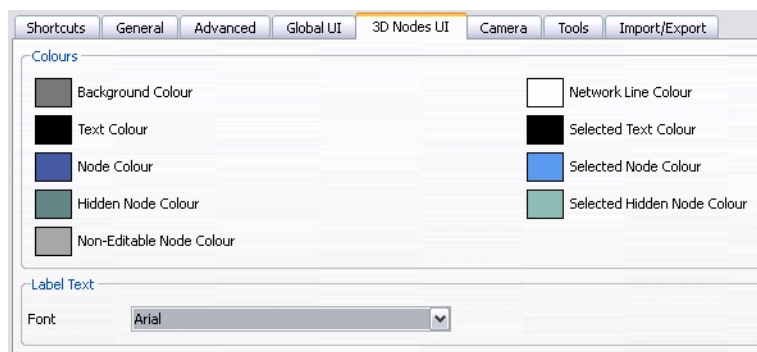
2. In the Colours section, select the colour to display for each item in the 3D Nodes window. These colour selections only apply to the features in the 3D Nodes window; they do not apply to the 3D element in your scene.

3. In the Label Text section, determine how the text is displayed in the 3D Nodes window from the **Font** menu.

Reverting a 3D Object to its Original State

If you make changes to the 3D object, such as its dimensions, position, or rotation, and you want to revert back to the object's original settings, you do not need to delete the object and start over. You have couple of options:

- You can use the Undo command to undo any of the changes you made to the object or in the panel since the project was last saved.

- You can use the Reset Transform command to revert to the object's original settings (position and dimensions).

The Reset Transform command will only affect the selected element, reverting it back to its default dimensions, position, and rotation for all the frames in the panel (First Frame and Last Frame).

To revert the 3D object to its original state:

1. Select the 3D object in your panel.

2. Select **Layer > Reset Transform**.

Animating 3D Objects

Now that you understand all the different changes you can make to a 3D object in your panel, you can create an animation with it using the first and last frame of the panel. You can modify the object in the first frame of the panel, modify the object in the last frame of the panel, and Storyboard Pro will transform the object from its first state to the last state at a speed defined by the duration of the panel.
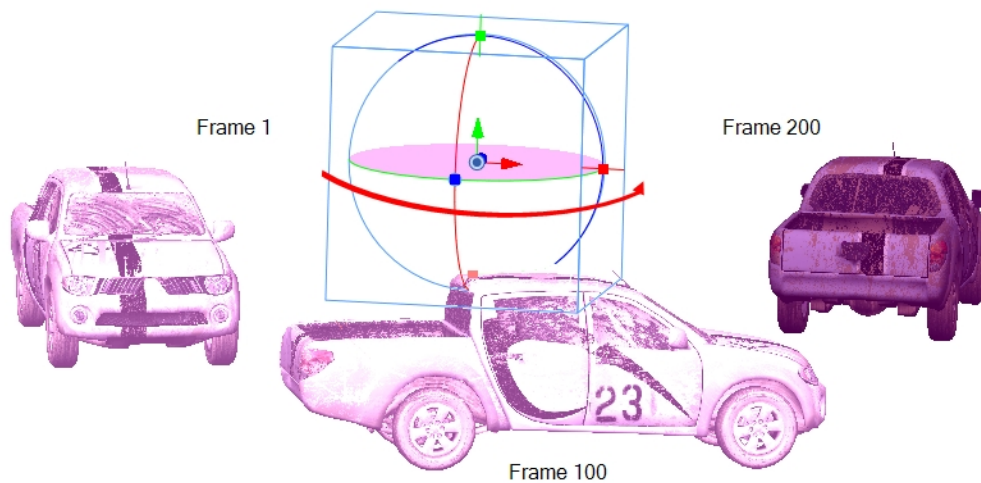
In the above example, the pickup truck starts on the left at frame 1 and ends on the right at frame 200. Storyboard Pro interpolates the various positions and rotations of the pickup truck as it moves from its initial state to its final state.

For suggestions of how you can use this interpolation to animate your 3D objects, see *Animating Interaction between 2D Objects and 3D Objects* .

To animate a 3D element in the 3D space:

1. Click the First Frame Transformation ⤵ button, select an element in the scene, and place it in its initial state. You can also make a multiple selection to move multiple 3D layers at once.

2. Make any of the following changes to the object:

    ‣ Position in 3D space

    ‣ Yaw, pitch, roll rotation (use the pivot point to change the arc size)

    ‣ Dimensions along the X, Y, and Z-axis

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You can also make changes to the individual nodes that make up the object.

3. Click the **Last Frame Transformation** ⸰ button, select the same element, and place it in its final state.

4. Repeat step 2.

5. Click the **Play** ▶ button to see the animation of the element as it moves from the first frame position to the final frame position.

The speed of the animation depends on the length of the panel, which is displayed in the Timeline view—see *Changing the Panel Duration* on page 333.

Handling 2D Objects in 3D Space

Where previously 2D objects could only be moved, rotated and animated on a 2D plane, now they too can be manipulated in 3D space. This means that flat, 2D objects can move forward or backward along the Z-axis, growing realistically bigger or smaller as they move towards or away from the camera. Features, such as Always Face Camera, mask the paper thin edges of 2D objects for camera rotations around these objects.

2D objects can be artwork drawn on a given layer, imported images, or flat templates imported from the Library view.

For more information on animating 2D objects, see *Animating Layers* on page 373

> **NOTE:** Animating a layer and animating a 2D object are interchangeable concepts. They are referred as layers as *2D objects* because you are working in 3D space. If you draw multiple elements on a single layer, such as the background, these elements will be animated together. Any element that you want to animate separately should be on its own layer.

This section includes the following topics:

- *Positioning 2D Objects in 3D Space* on page 272
- *Locking 2D Objects to the 3D Camera* on page 277
- *Modifying 2D Objects in 3D Space* on page 278
- *Animating Interaction between 2D Objects and 3D Objects* on page 279

Positioning 2D Objects in 3D Space

You can manipulate a single 2D object in 3D space, however you can also stagger multiple 2D objects along the Z-axis to make a multiplane or rotate planes to build open-faced rooms. In order for a 2D object to be manipulated in 3D space, the panel must be 3D enabled—see *When deleting a 3D model from the 3D Models folder of the Library, every instances of the model used in the project will be deleted at once. A warning message will prompt you to confirm or cancel the action.* on page 263.
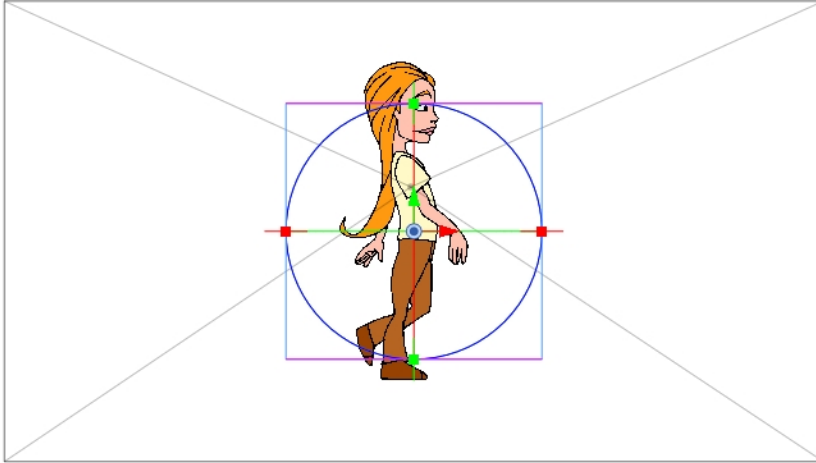
To reposition your 2D object in 3D space:

1. Go to the Stage or Camera view.

2. Be sure that your 2D object's layer is selected.
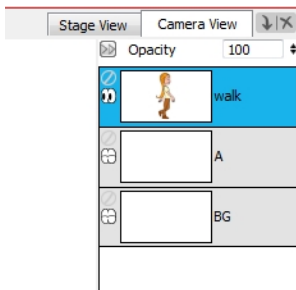
3. Select the First Frame ⌇ tool.

   Manipulators appear over your object layer's pivot point.

4. Use the manipulators to manipulate your image in the following ways:

   ‣ **To squash and stretch your image vertically:** Pull the green, square points located at the top and bottom of the manipulator circle.
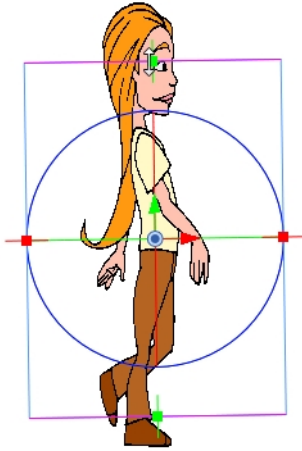
‣ **To squash and stretch the image horizontally:** Pull the red, square points located on the right and left sides of the manipulator circle.
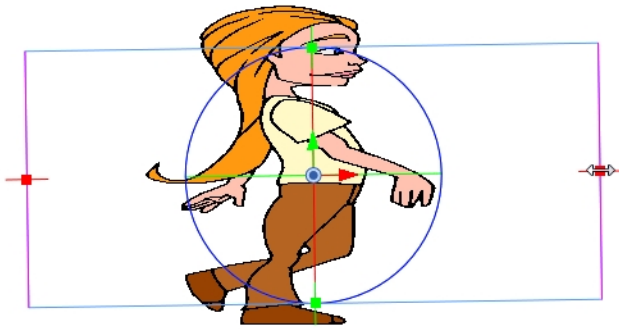
‣ To scale the image proportionally: Hover anywhere over the box outside the manipulator circle until the cursor turns into a white, double-headed arrow. Pull in any direction to scale the image up or down.
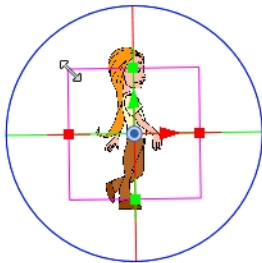
‣ **To move the image vertically:** Click the green, vertical arrow and pull it up or down.
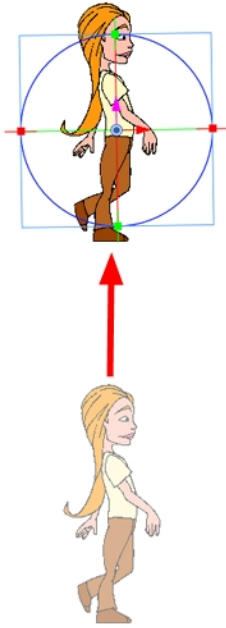
‣ **To move the image horizontally:** Click the red, horizontal arrow and pull it left or right.
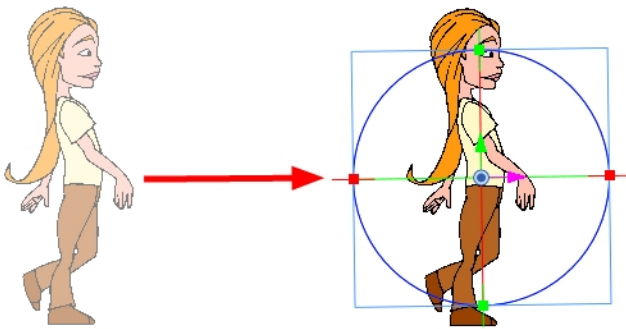
‣ **To move the image backwards or forwards along the Z-axis:** Go to either the Top or Side views and use the blue arrow to pull the layer closer or farther from the static camera cone.
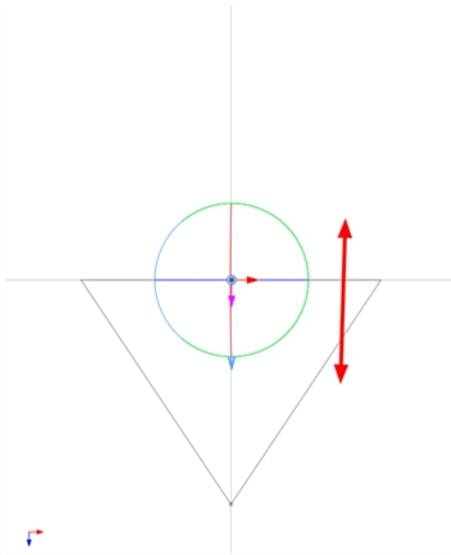
▸ **To rotate the image on the X-axis:** Hover over the vertical line (actually a ring) bisecting the manipulator circle. The rotate X-axis cursor appears. Pull up or down to rotate your object along this axis.
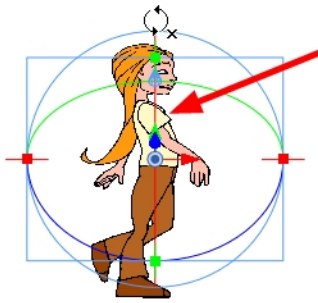
▸ **To rotate the image on the Y-axis:** Hover over the horizontal line (actually a ring) bisecting the manipulator circle. The rotate Y-axis cursor appears. Pull towards the left or right to rotate your object along this axis.
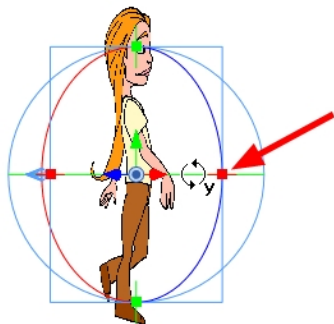
▸ **To rotate the image on the Z-axis:** hover anywhere over the manipulator ring. The rotate Z-axis cursor appears. Pull clockwise or counter clockwise to rotate the object.
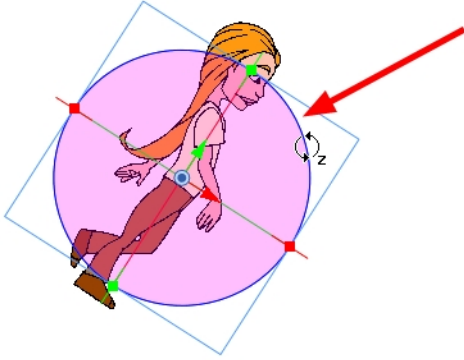
You can perform any of these manipulations in combination. For example, after have rotated your 2D object 45 degrees around the Y-axis, you can reposition it along the Z-axis.

Locking 2D Objects to the 3D Camera
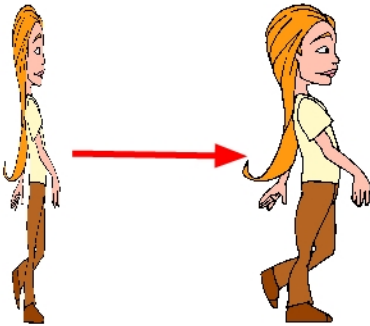
The one obvious problem with creating an animated 3D camera rotation around a 2D object, is that you will be able to see the paper thin edges of the 2D object. Fortunately, you can lock the object so it always faces the camera.

To lock an object to face the camera:

1. In the Layers panel, select the layer that contains the 2D object you want to align with the camera.
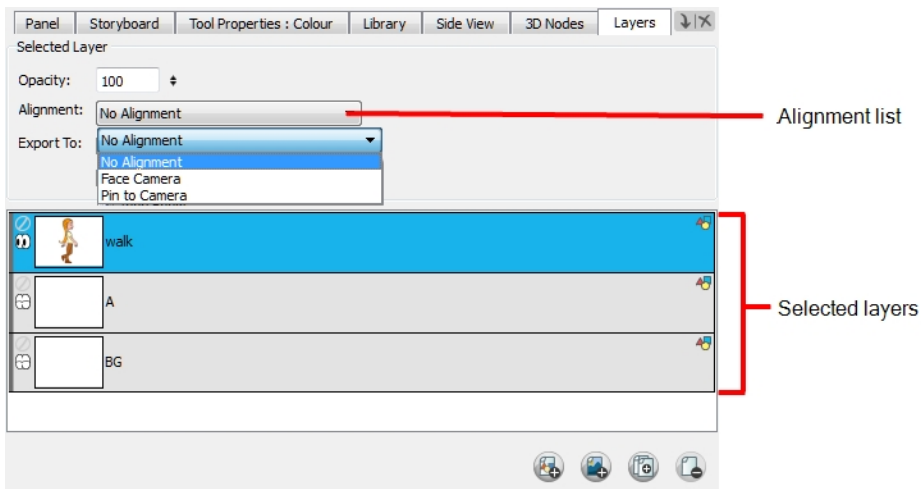
2. From the Alignment list, select one of the following:

    ‣ **Face Camera**: The layer is oriented to face the camera, so that it rotates around its pivot point to always face the camera, but does not move with the camera. Use this option when you plan to position your 2D layer in 3D space, where that layer belongs in the scene.

    ‣ **Pin to Camera:** The layer is oriented to the camera's perspective. Essentially the layer always moves with the camera. The advantage of using this option is that you can simply draw on top of everything in your scene.

3. In the Camera view, verify that your once distorted looking 2D object now appears to face the rotated camera.

Modifying 2D Objects in 3D Space

Flat, 2D objects that you have integrated into your 3D scene may need to be edited, even after the camera has been repositioned or rotated in 3D space. An edit usually entails needing to redraw and recolour part of your object. However, after making several rotations or a movement in 3D space, you can reach a situation where the Stage view and the Drawing Layer of your 2D object are no longer parallel to one another. In this case, you will not be able to draw on that layer. In order to make your edits, you will need to use the **Look At Selected** feature.

To use the Look at Selected feature:

1. Select the desired layer, by either clicking on that layer in the Stage view's Layer Section, from the Scene thumbnail's Layer Tab or directly in the Stage view using either the First Frame or Last Frame tools, depending on which frame you are on.

Stage view Layer Section   Scene thumbnail Layer Tab

Stage view selection
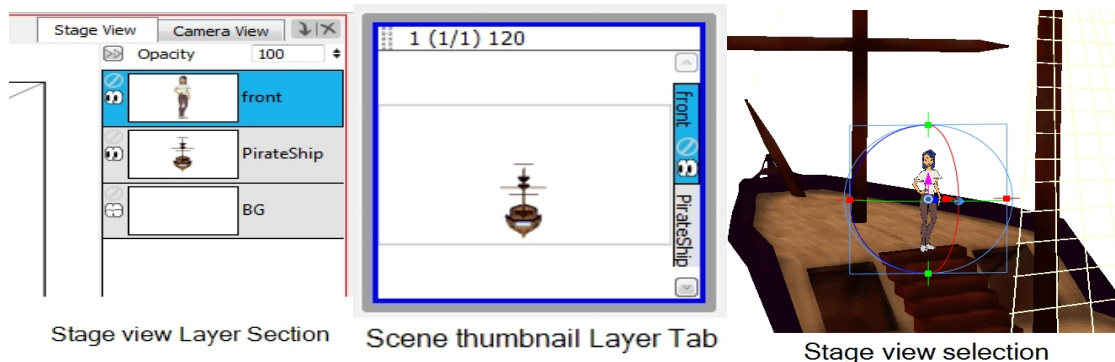
2. Click the **Look At Selected** button in the Stage view status bar.

The Drawing object layer is perpendicular to the Stage view, ready for drawing edits.

NOTE: You can use rotate the light table by pressing: [Ctrl]+[Alt] (Windows) or [⌘]+[Alt] (Mac OS X).
You can rotate the Stage view by pressing [V] or [C] (Windows) or [Shift]+[⌘] (Mac OS X).

Animating Interaction between 2D Objects and 3D Objects

Now that you have a true three-dimensional space to work in, complete with matching three-dimensional objects, you can create sophisticated storyboards that feature realistic interaction between 2D elements and 3D elements.

For example, if you had a character that wanted to hop into a 3D car, then you can use the First and Last Frame features to easily animate the following scene:

- The character walking towards the car

- Animating the car door node opening

- The character disappearing into the 3D car object

- Animating the car door node closing

- The 3D car turning sideways and moving out of the frame
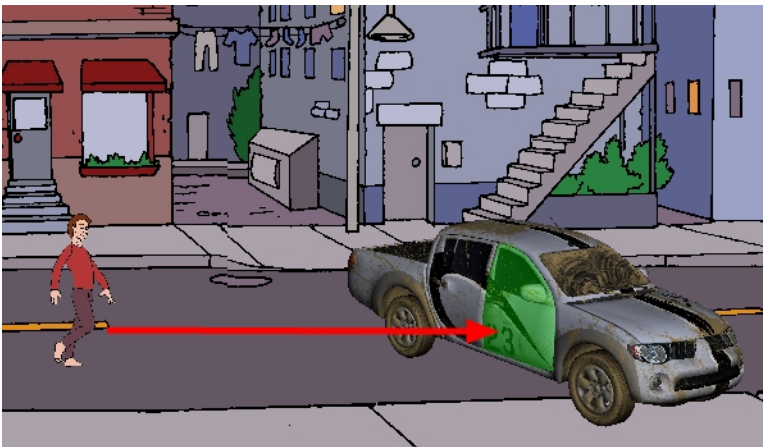
In the first frame, the 2D character is walking towards the pickup truck with its door closed.

In the last frame, the 2D character is closer to the pickup truck and by rotation, the door node on the pickup truck. It was angled out to make it appear open.

When you play this animation, the 2D character will appear to move towards the truck as the door slowly opens.

By harnessing the three-dimensional nature of the car, you do not need to create extra drawings to handle the animation of doors opening and closing, or of the car rotating to drive down the street.

You can also use the three-dimensional nature of the objects and the scene space to allow characters to walk in front, walk behind, or even through objects without having to resize objects to create the illusion of distance. By laying these elements out in the three-dimensional space, they can physically walk around and through these objects, allowing you to create a more realistic storyboard that is closer to the final product.

Animating the 3D Camera

Not only can you move 2D and 3D objects in 3D space, but you can also move and animate your camera in this 3D space as well. This makes for impressive animatics and is also a great way to show off imported 3D objects. If the first frame does not do justice to your 3D camera movement in a printed or PDF version of your storyboard, you can add snapshots to better illustrate those wide sweeping, 3D camera movements.

This section includes the following topics:

How to Animate the 3D Camera

To animate the 3D camera:

1. Be sure you are in the Camera view and that your scene is enabled for 3D. You can also use the Top and Side views for further clarity if needed.

2. In the Tool Properties panel, click the Add Keyframe ⊹ button. Even if the playhead is not at the start of the currently selected panel, a keyframe will be added to the first frame of that panel.
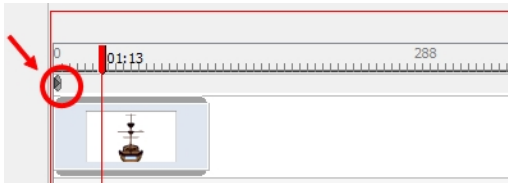
NOTE: If the Timeline view is not displayed, select **Windows > Timeline**.

3. In the Camera view, use the Camera ▓ tool and adjust the camera manipulators to change the camera's position and rotation—see *Rotating the Camera* on page 284.

4. Do one of the following:

    ‣ In the Timeline view, the playhead to the frame on which where you want to place your final camera position. In the Tool Properties panel, click the Add Keyframe ⊕ button to current frame.

    ‣ Click the Add Keyframe ⊕ button at the end of current panel.

OR
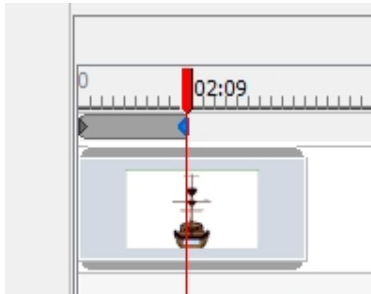
Add keyframe to current frame
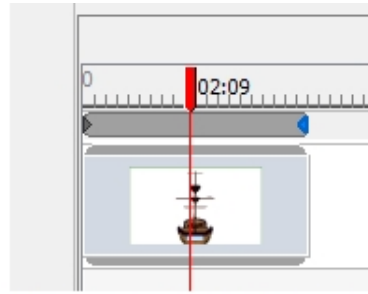
Add keyframe to end of current panel

A keyframe is added to the selected location.

5. In the Camera view, with the Camera 🎥 tool selected, use the camera manipulators to move the camera into its final position. If you do not see any manipulators in the Camera view, your second keyframe might not be selected in the Timeline view.

Manipulators

First keyframe camera position

First keyframe camera position
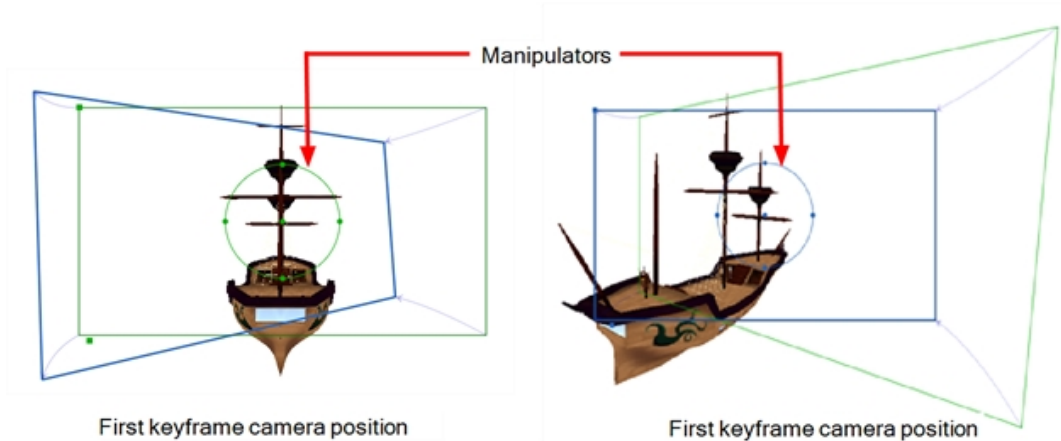
NOTE: If the playhead is not at the correct keyframe, in the Tool Properties panel, click the Go to Selected Keyframe button to move your playhead there.

6. Continue to adjust your camera move until you are satisfied. In the Timeline view, use the red playhead to scrub back and forth between keyframes to view the smooth, interpolated movement. Adjust the camera position on the first or last frame or add more keyframes between the first and last keyframes.

    From the Camera view Status Bar, use the Camera Mask ▫ to get a better sense of what the exact scene framing will look like.
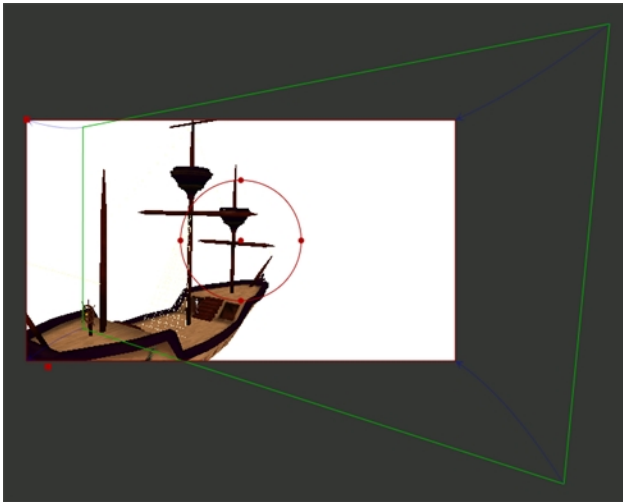
For information about the options available in the Camera tool's Tool Properties, see *Camera Tool Properties* on page 348.

Using the Camera Manipulators

To reiterate, the camera manipulators will only appear in the Camera view if keyframes have been added to a panel in the Timeline and the current frame is the same as the frame of the selected keyframe. You can select a camera keyframe without moving the playhead. The camera manipulator looks like a circle with four points dotting the circumference and a single point in the centre. If you see arrows in the centre of the manipulator instead of points, you are in the Stage view and not in the Camera view. The Stage view is great for viewing your 3D objects in relation to one another, but not as accurate as the Camera view for your storyboard framing.

This section includes the following topics:

- *Colour Coding* on page 283
- *Camera Moves* on page 283
- *Rotating the Camera* on page 284
- *Adding Control Points* on page 286

Colour Coding

In the Timeline view, if you have the first keyframe of the panel selected, then the rectangle that defines the camera frame, along with a large X that quarters the camera frame, will be highlighted in green. If you have the last keyframe selected, then these elements will appear in red. If you have any keyframe between the first and last selected, then these elements will appear in blue. This colour coding is useful in avoiding confusion when making camera movements.

Camera frame when the first keyframe is selected

Camera frame when the last keyframe is selected

Camera frame when any keyframe between the first and last is selected

Camera Moves

In the Camera view, if you move the camera on any keyframe after the first keyframe, you will see the colour and position of the camera frame of the keyframe before. In the example below, the camera was moved down and to the left on the second keyframe. Pale blue arrows also appear to show you how the camera will be interpolated between these two frames. In the following example, it is a diagonal move down and to the left.

Camera view   Side view   Top view
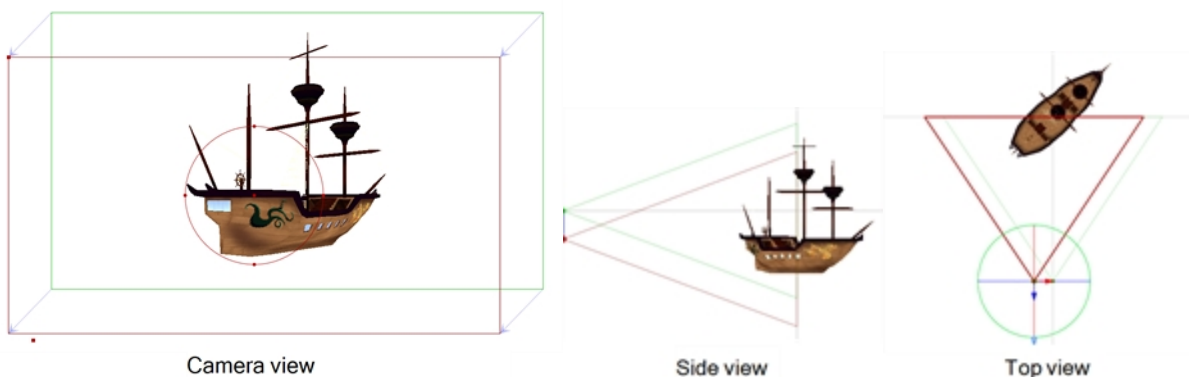
You can move the camera's position, with the Camera 🐍 tool in one of two ways:

- By grabbing the camera frame and dragging it to the desired position.

- By grabbing the centre of the manipulator and drag them to the desired position.

Trucking In and Out

If you want to create a truck in or truck out (a move along the Z-axis), you can use the manipulators in the Top or Side views, (you can also click on the upper-left corner of the frame in the Camera view). If you select the arrow pointing along the Z-axis and drag the manipulators from that arrow instead of from the centre point of the manipulator circle, your movements will be locked to that axis. This is useful if you do not want to accidentally displace the up and down or left and right position of your camera frame.

Remember that the pale blue arrows in the Camera view do not necessarily indicate backward and forward movements. If your second camera frame appears either larger or smaller than the initial camera frame position, then you can be sure that a camera truck in or truck out was made.

Not a truck in or truck out   Correct truck in
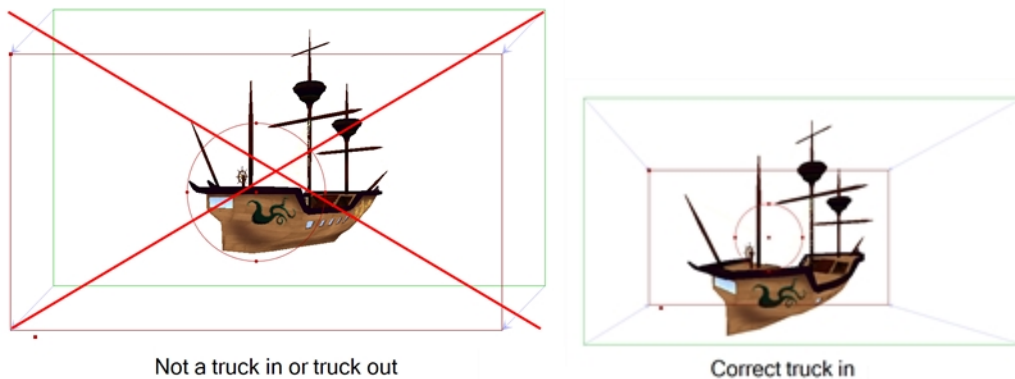
Rotating the Camera

With your scene enabled for 3D, you can rotate your camera on all three axes in the Camera view, as well as in the Top and Side views. As you pass your cursor over the camera manipulators, the cursor changes to indicate this axis on which you will be performing the rotation. Think of the X, Y and Z axes as poles that you can clamp your camera to in order to rotate on that pole or axis. For example, the Y-axis would be a pole that extends from north to south. If you clamp your camera to that pole, your camera would actually move from side to side, or be rotating around that vertical axis.

In the Camera view, hover the cursor over:

- The N and S points on the manipulator circle will bring up the X-axis cursor $\circlearrowleft_\times$. This means that if you pull up or down on these points, you will be rotating your camera on the X-axis, the axis that runs horizontally, or from east to west, in the Camera view.

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Rotation on the X-axis

Camera view   Side view   Top view
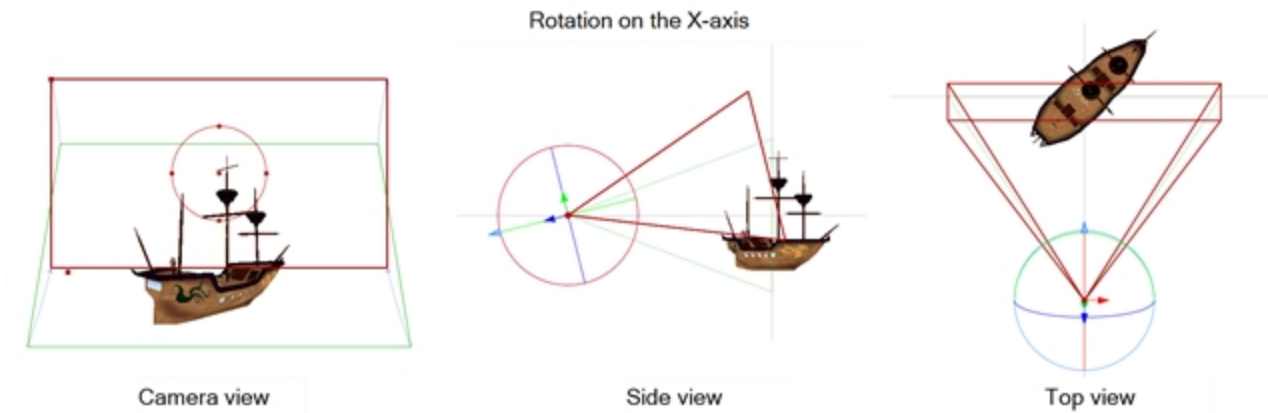
- The E and W points on the manipulator circle will bring up the Y-axis cursor ⟳. This means that if you pull towards the left or right on these points, you will be rotating your camera on the Y-axis, the axis that runs vertically, or from north to south, in the Camera view.

Rotation on the Y-axis

Camera view   Side view   Top view
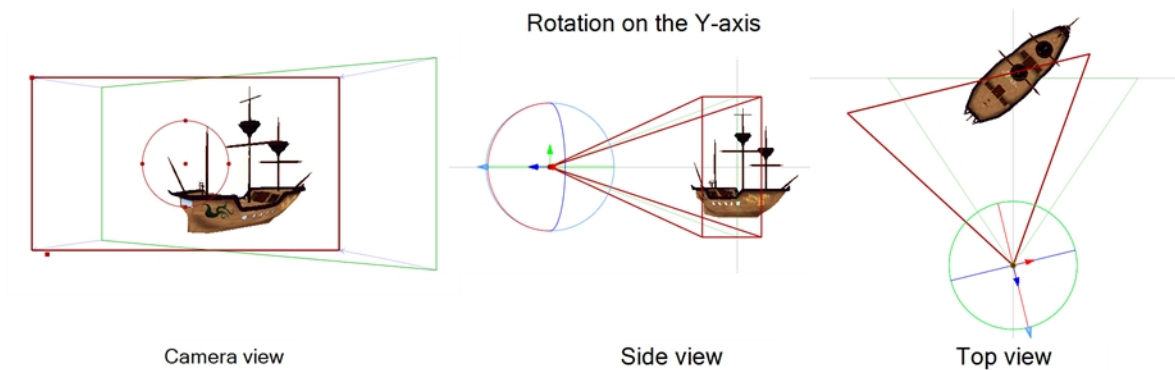
- Anywhere but the points on the manipulator circle will bring up the generic rotation cursor ⟳ . In the Camera view, this cursor represents a rotation on the Z-axis.

Rotation on the Z-axis

Camera view   Side view   Top view
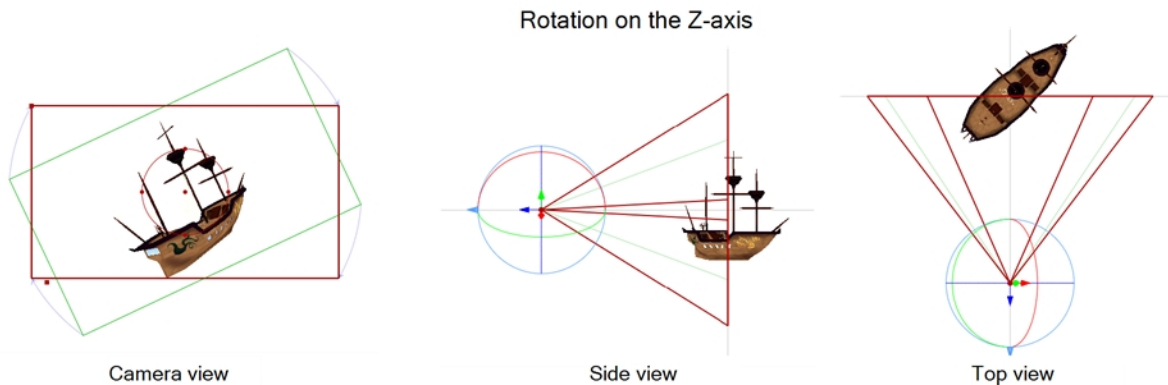
These cursors will obviously differ depending on which view you are in. For example, in the Top view, hovering your cursor over the manipulator circle will bring up the Y-axis cursor instead of the generic rotation cursor. In the Top and Side views, there are no points on the manipulator circle, but rather three rings that each control rotation on one of the three axes. Two of these axes are seen as lines instead of rings from the perspective.

Adding Control Points

Once you have created an animated camera move you have also inadvertently created a camera path. The camera path is the route that the camera follows from point A to point B, or in this case, from one keyframe to another. By default, this path is always the shortest route from point A to point B, in other words, it is always a straight line. However, you have the option of adjusting the shape of this path, if you wanted to, for example, make this path curved.

You can change the shape of a camera path by adding control points to the path. This can only be done in the Top, Side and Stage views, they cannot be added from the Camera view. However, in the Camera view, the pale blue arrows that represent the camera path will change to match the new camera path shape.

To add a control point to camera path:

1. Go to either the Top, Side or Stage views.

2. Click the line between the two camera cones that represent the position of the camera on the first and second keyframes in question.
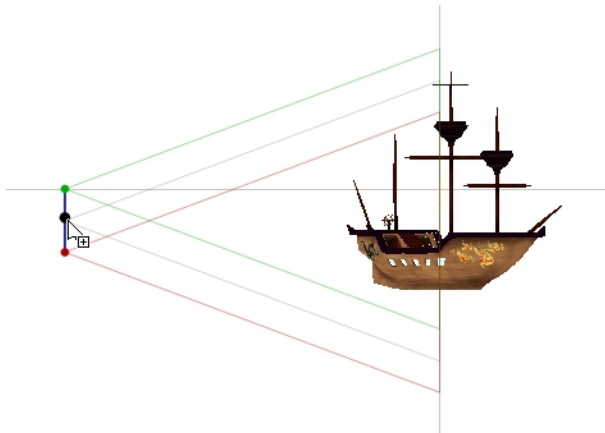
A black point appears on the path in both the Top and Side views, as well as on the path between the two keyframes in the Timeline view.

NOTE: In the Timeline view, keyframes are represented as diamonds, while control points are represented by circles. Control points change the shape of a path, however, they are not locked in time.

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3. Click and drag the black point to the desired location. Notice how the path shape bends and changes depending on the location of the control point.
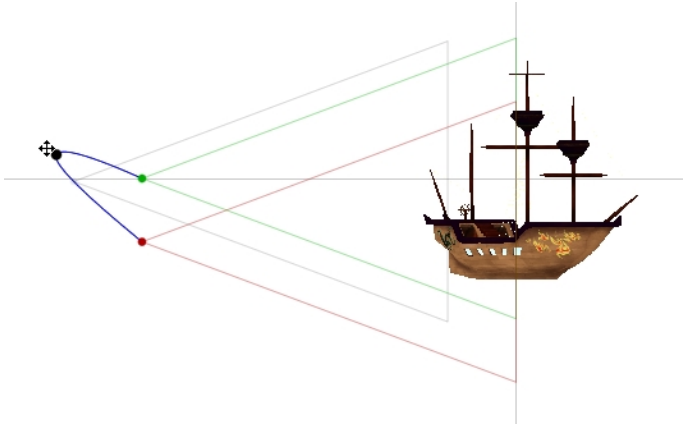
4. Add more control points if necessary.

5. In the Timeline view, drag the playhead back and forth, between the two keyframes, while observing the new camera movement in the Camera view.
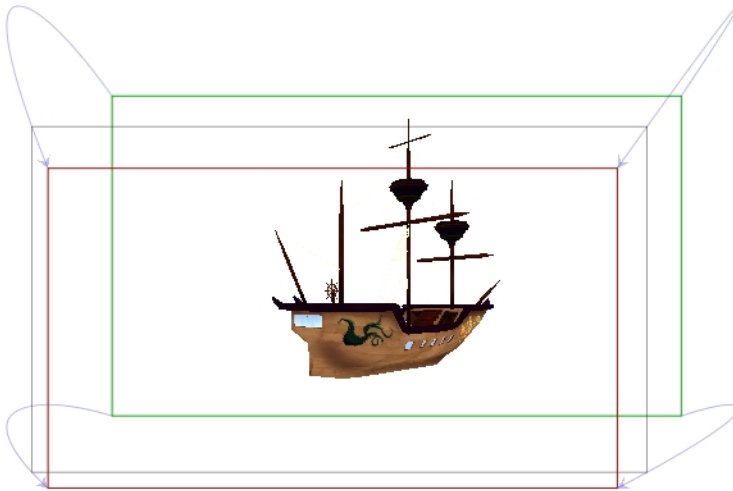
6. Make further adjustments where necessary.

Chapter 8: Adding Colour
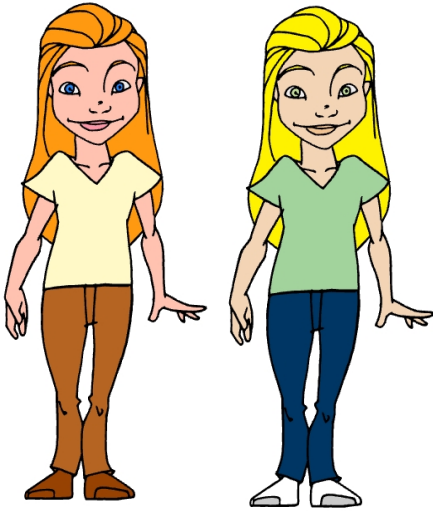
With Storyboard Pro, you can add colour to your projects.

This chapter includes the following topics:

Colours

To paint drawings and select colours, you will use the Colour view. There is an active colour swatch at the top, that indicates the current colour. You can modify the colour and opacity using the sliders beneath. If you are going to frequently use a colour, then you can save this colour for reuse by creating a colour swatch out of it.
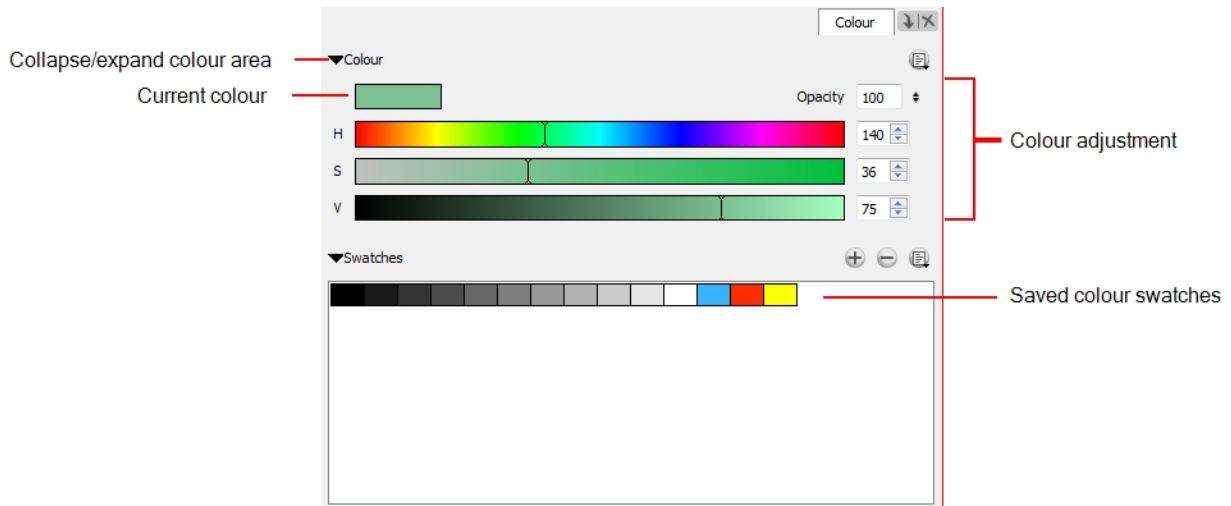
Like other views, you can dock and undock the Colour view. When you first open the Colour view in the Panel view, it is docked. You can undock it so that it becomes its own window which you can move around freely.

Views contain specific groupings of tools that are displayed in the Panel view or as windows that you can position anywhere on your screen. However, you can undock a view that is displayed in the Panel view. When you do this, it becomes a window.To add a view, **do one of the following**:Select **Windows >** *desired view*.

A docked Colour view   Colour view in a window
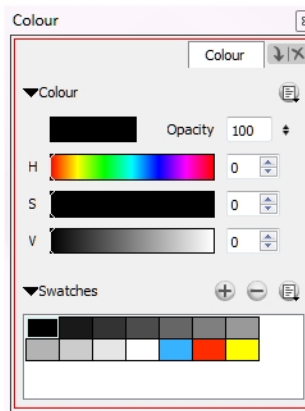
In a Panel view, click the View Menu button and select a view from the menu.To dock a window in the Panel view: Drag the window's tab onto the Panel view and dropping it in the tab area.The view is added to the Panel view.

To undock a view:In the Panel view, drag a view by the tab, moving away from the Panel view. The view turns into a window.

To open the Colour view, in the Panel view, select the **Tool Properties: Colour** tab. If you have separated the Tool Properties and Colour view, select the **Colour** tab–see *Managing the Views* on page 70.

This section includes the following topics:

- *Modifying the Current Colour* on page 292

- *Creating a Gradient* on page 295

- *Adding a Colour Swatch* on page 296

- *Deleting a Colour Swatch* on page 298

- *Naming and Ordering Colour Swatches* on page 298

- *Working with Colour Palettes* on page 298

Modifying the Current Colour

There are several ways to modify the current colour. It can be modified directly in the Colour view using the sliders (HSV or RGB), or using the Colour Picker window.

To modify the current colour in the Colour view:

1. In the Colour view, make sure the Colour area is expanded by clicking on the **Collapse/Expand** arrow.

2. In the Colour view, slide the H,S,V sliders left or right to adjust the colour. You can also decrease and increase the colour's alpha using the Opacity arrows.

   ‣ In the HSV/RGB menu, you can toggle between H,S,V and R,G,B sliders.
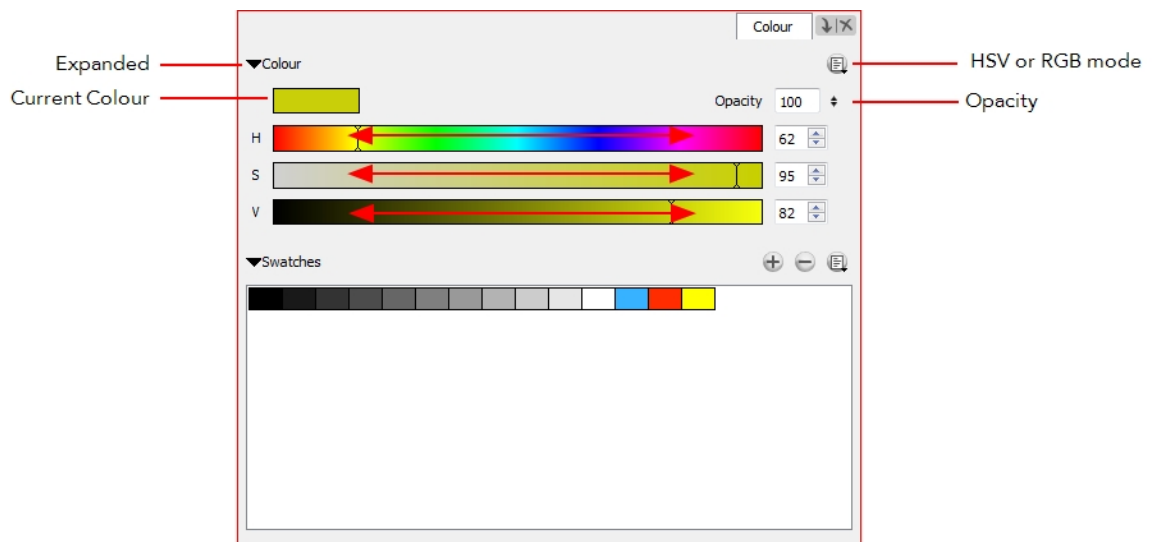
To modify the current colour in the Colour Picker window:

1. In the Colour view, make sure the Colour area is expanded by clicking on the **Collapse/Expand** arrow.

2. Double-click on the current colour swatch to open the Colour Picker window.
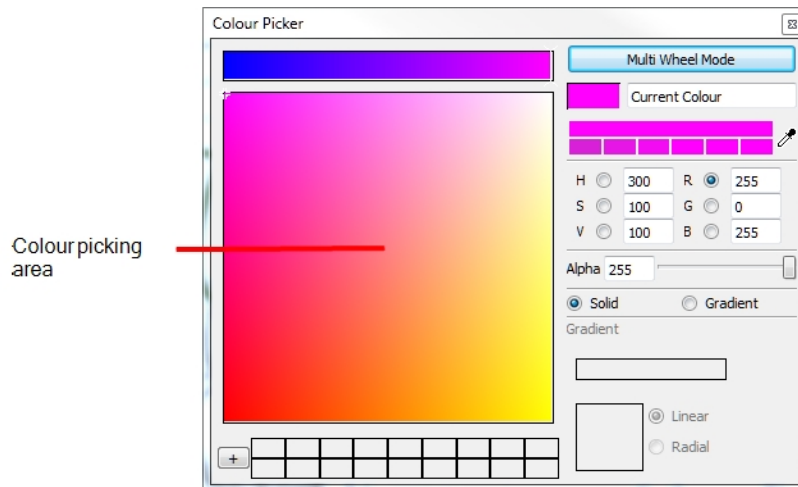
3. In the Colour Picker window, do one of the following to modify the current colour:

   ‣ In the colour picking area, click to select a colour.

   ‣ Type in the HSV or RGB values in the corresponding fields. Select the R,G,B or H,S,V options to change the look of the colour picking area.

   ‣ Click the Dropper button to select any colour from the Storyboard Pro interface.

NOTE: When using the Dropper tool, the selected colour becomes the current colour, but is not added to the colour swatches.

You can also click the Multi Wheel Mode button to open the Multiwheel Colour dialog box. This displays all the picking area styles and a picking undo list. Click the Single Wheel Mode button return to the regular Colour Picker window.
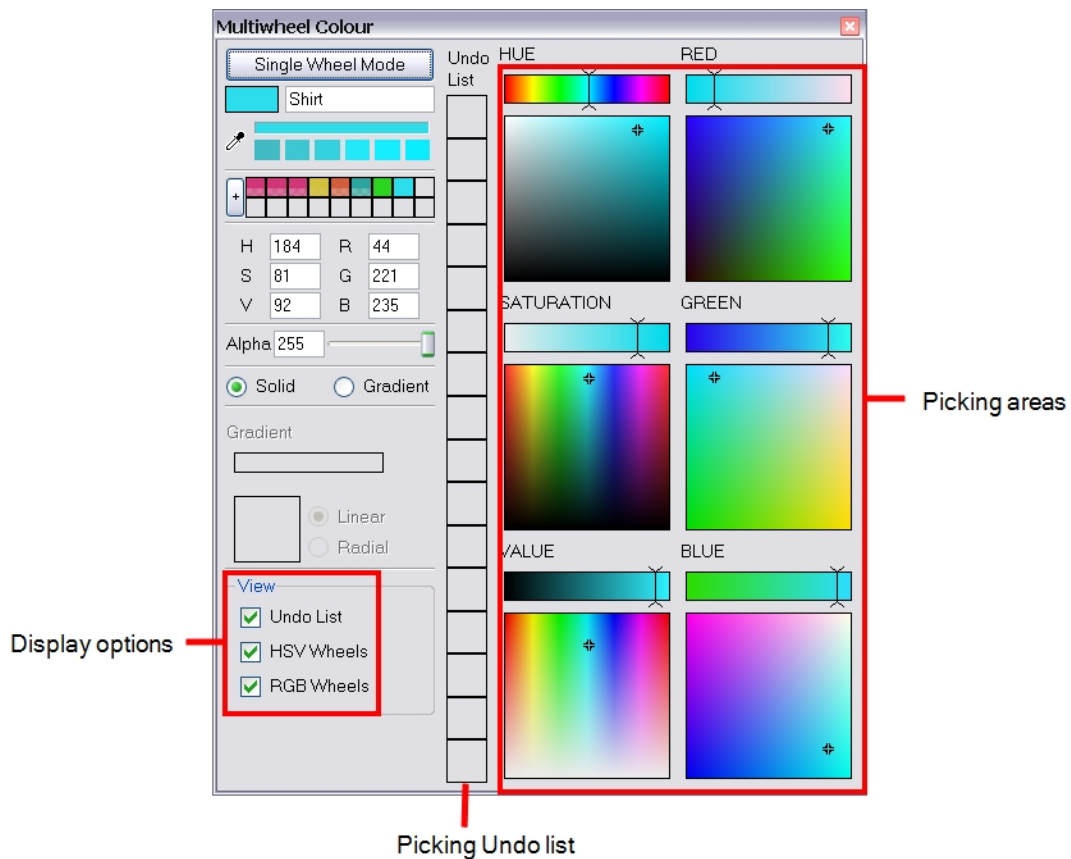
4. Click the Shade Scale swatches to modify the shade of the selected colour.

5. Adjust the level of transparency with the Alpha slider, or type the value directly in the Alpha field.

6. Click the **Add** button to add the current selected colour to the Colour Storage Library, so you can quickly access it later.
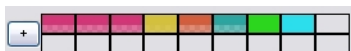
7. You can rename the colour swatch in the Colour Picker window or directly in the colour list by double-clicking its name.
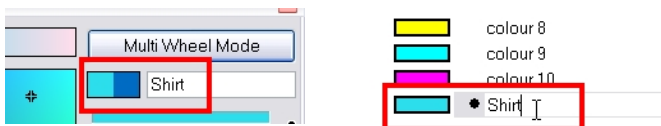
Creating a Gradient

Vector drawings can be painted using linear and radial gradients. Once painted, you can modify the position of the gradient—see *Editing Gradients and Textures* on page 306.

To create a gradient colour:

1. In the Colour view, double-click the current colour swatch.

   The Colour Picker window opens.

2. Select the **Gradient** option.
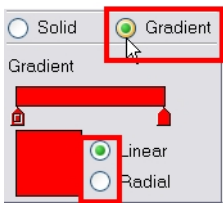
3. Select the **Linear** or **Radial** option.

4. In the color picking area, use the gradient arrows to modify the colours.
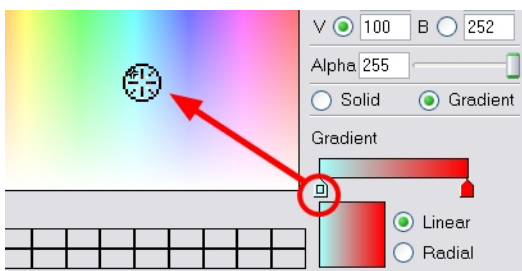
▸ Click between the arrows to add extra colours.
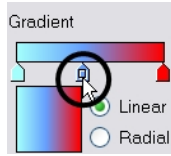
▸ Drag the arrows downwards to remove them.

▸ Drag the arrows left and right to modify the gradient distance.

Adding a Colour Swatch

You can use two different types of colour swatches, these are described in the following sections:

NOTE: Once added, a colour swatch can no longer be modified. You will have to delete the swatch and add a new one.

Vector Colour Swatch

You can paint your drawings with vector swatches, which are the solid and gradient colours.

To add a vector colour swatch:

1. In the Colour view, make sure the Colour area is expanded by clicking the **Collapse/Expand** arrow.

2. Using the Colour view sliders or the Colour Picker window, adjust the colour for your new swatch.

3. Click the Add Colour ┿ button or select **New Colour Swatch** from the Colour Swatch menu.
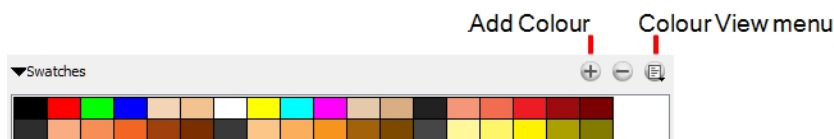
Bitmap Texture Swatch

You can paint your vector drawings with bitmap texture swatches. You can import your own texture and add them to your palette. Texture have to be ***.psd** or ***.tga** files. Transparency is supported. Once painted the position of the gradient can be edited—see *Editing Gradients and Textures* on page 306.

To create a bitmap texture swatch:

1. In the Colour Swatch menu, select **New Texture**.
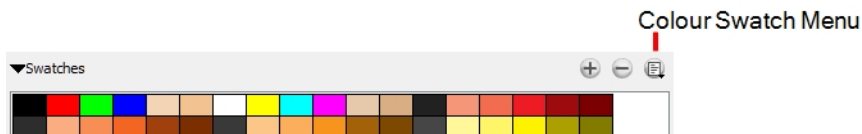
   A browser window opens.

2. Browse for a PSD or TGA bitmap file created in a third party software and click **Open**.
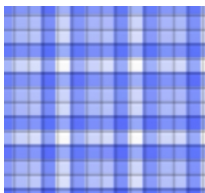
   A textured colour swatch is added to the swatch palette.

Deleting a Colour Swatch

To delete a colour swatch:

1. In the Colour view, select a colour swatch to delete by clicking a swatch. To select multiple swatches, press [Ctrl] (Windows) or [⌘] (Mac OS X), and click the swatches to delete. To select multiple swatches in a range, press Shift, click the first swatch to delete and then click the last swatch.

2. Do one of the following:

   ‣ Press [Delete].
   ‣ From the Colour Swatch menu, select **Delete Swatch**.
   ‣ Click the Remove Colour — button.
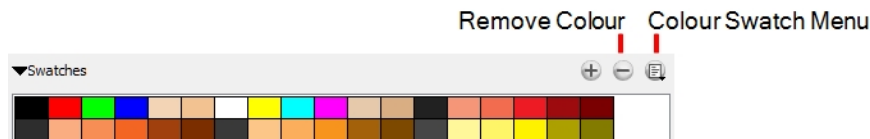
Naming and Ordering Colour Swatches

If you plan on adding a lot of colour swatches to your palette, it is a good idea to organize them by naming and ordering them.

To name a colour swatch:

1. In the Colour Swatch menu, deselect the **Swatch Mode** option.

2. In the Colour list, double-click on a swatch name to rename it.
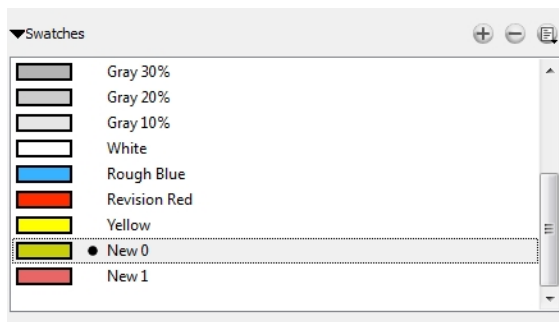
3. Once you are done renaming the swatch, press Enter/Return to validate the entry.

To order your swatches:

   ‣ In the Colour list, either in Swatch mode or List mode, drag and drop your swatches to change the order.

Working with Colour Palettes

Once you have established the colours to be used throughout your storyboard, you can save it as your default colour palette for the project. You can also import and export colour palettes so that everyone on your team is consistently used the same colours.

NOTE: Toon Boom colour palettes are appended with a .plt extension.

To save a default colour palette:

‣ In the Colour View, click the Colour Swatch menu and choose **Save as Default Palette**.
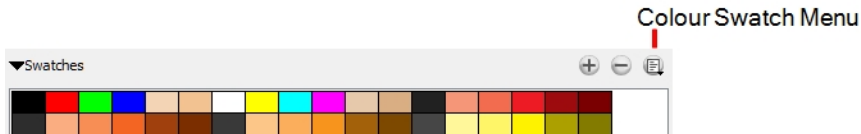
Colour Swatch Menu

To export a colour palette:

1. From the Colour Swatch menu, select **Export Colours**.

2. In the Export Colours window, give your palette a name and click **Save**.

To import a colour palette:

1. From the Colour Swatch menu, choose **Import Colours**.

2. In the Import Colours window, select a colour palette and click **Open**.

How to Paint Vector Layers

Learn how to paint your vector drawings by following these instructions.

To paint a drawing:

1. In the Tools toolbar, select the Paint ⬤ tool, press [Alt] +[I] or select **Tools > Paint**.

2. In the Panel view, select the **Tool Properties: Colour** tab. If you have separated the Tool Properties and Colour view, select the **Colour** tab–see *Managing the Views* on page 70.
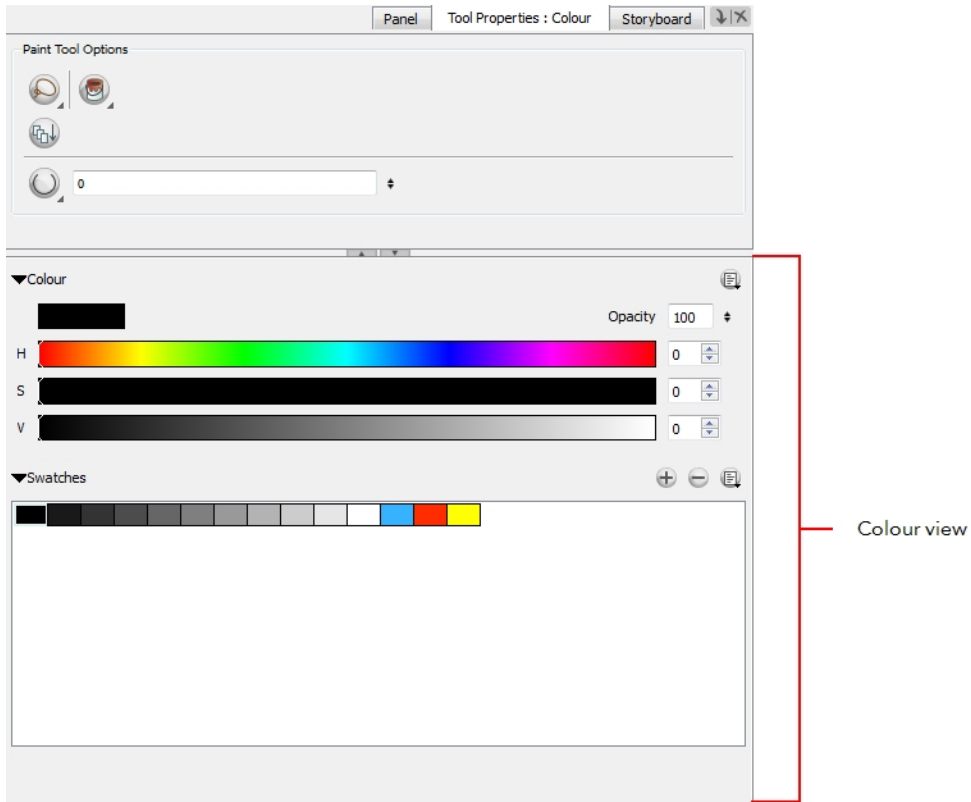
3.   In the Colour view, select a colour from the palette.

4.   In the Stage view, start painting on your drawing by clicking the area to be painted. Note that the area to be painted must be closed.

Painting with the Paint Tool
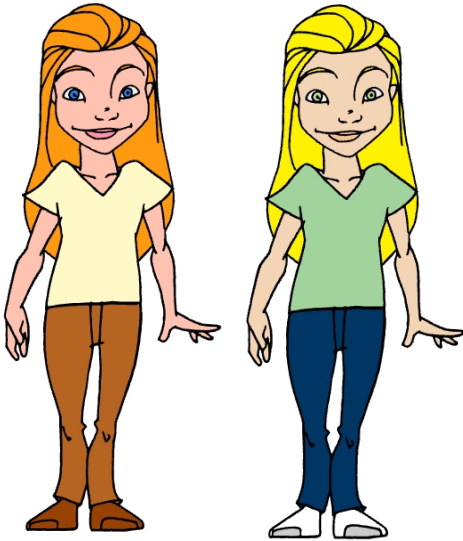
The main tool you will use to paint your drawings is the Paint tool. The Paint tool can be used in several different modes, and can be customized in the Tool Properties view.

The Paint tool only paints closed zones and vector drawings. If you have gaps in your lines, you must close them using either the Brush, Pencil, or Close Gap tools.

> **NOTE:** The Paint tool only paints vector drawings. To colour bitmap drawings, use the Draw Behind mode–see *Draw Behind* on page 195 *Draw Behind* on page 195.

To paint with the Paint tool:

1. In the Timeline or Thumbnails view, select the panel and layer on which you want to paint.
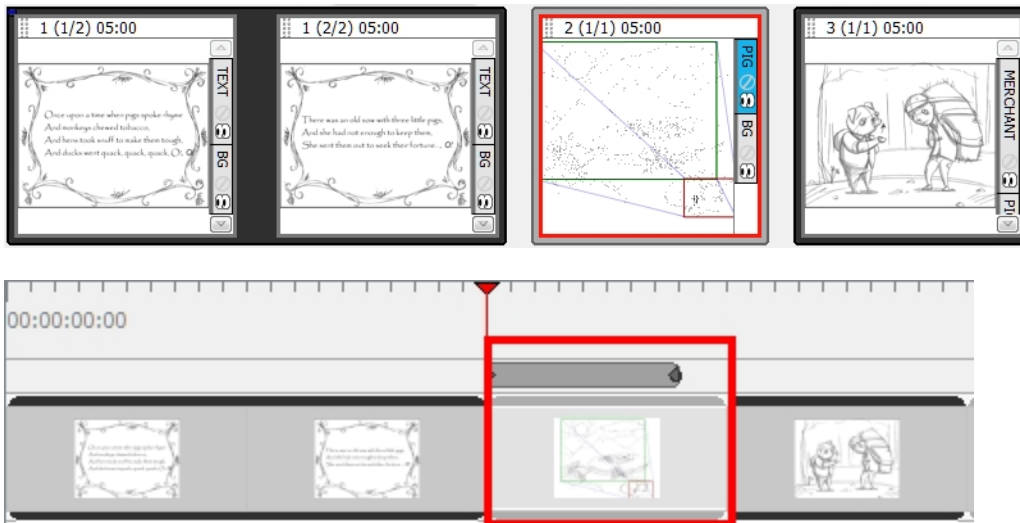
2. In the Tools toolbar, click the Paint 🖌 tool, press [Alt] +[I] or select **Tools > Paint** from the top menu.

3. In the Colour view, select a colour.

4. In the Stage view, start painting. You can either click to paint a zone or trace a lasso or marquee selection to paint several zones at the same time.

Paint Tool Properties

When you select the Paint tool, its properties and options appear in the Tools Properties panel.
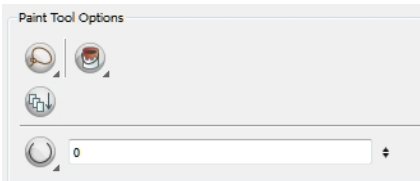
Lasso and Marquee

The Lasso 🔵 and Marquee 🔲 options let you choose how you will select areas to paint by clicking and dragging the cursor to paint on drawings. The default selection mode is Lasso. Whichever mode you choose, everything inside the selection will be painted.

Lasso: Lets you draw a selection are around the zones to be painted.

Marquee: Lets you draw a rectangle selection box.

NOTE: Hold down the Alt key to switch to the opposite mode of your selection.

Painting Modes

The Paint 🖌 tool has three different modes: Paint, Paint Unpainted, and Unpaint.

To access the paint modes:

▸ In the Tool Properties panel, click the Paint 🖌 tool. You can also find these tools in the Tools toobar and in the Tools menu.
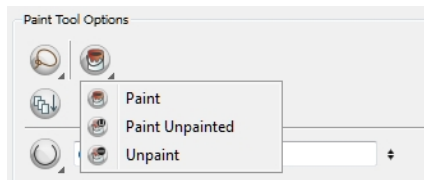
Paint Mode
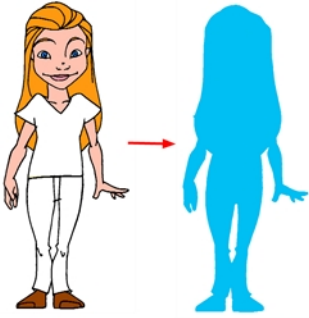
The Paint 🖌 mode paints everything it touches, including empty and filled zones.

Paint Unpainted Mode
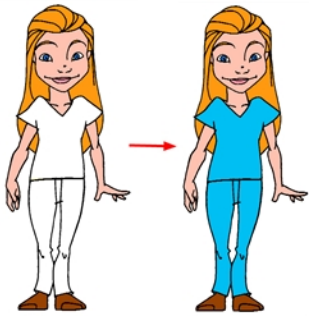
The Paint Unpainted 🖌 mode paints only empty zones. Any line or filled zone will remain unchanged.

Unpaint Mode
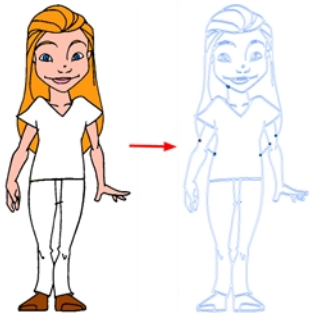
The Unpaint 🖌 mode unpaints everything it touches, including empty and filled zones.

Automatically Closing Gaps

The Automatic Close Gap ◯ option has four modes available: No Close Gap, Close Small Gap, Close Medium Gap, and Close Large Gap.

The Automatic Close Gap option is used while painting drawings with small gaps. Instead of having to close them manually either with the Brush tool or Close Gap tool, Storyboard Pro will analyse the drawing and close the gaps while you paint according to the selected mode.

The automated gap closing should be done using the zoom function setting of the Stage View. If your eye does not see the gap, Storyboard Pro will not either.
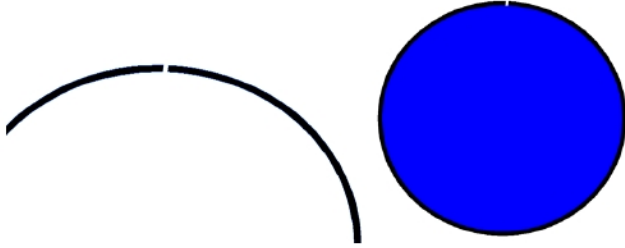
To access the Automatic Close Gap options:

‣ In the Tool Properties panel, click the Automatic Close Gap ○ button.
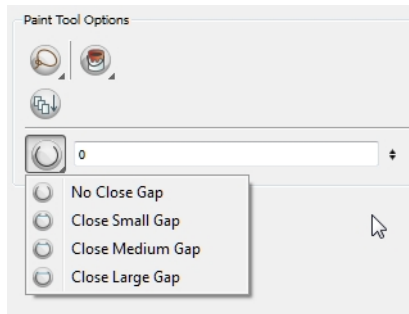
Selecting a Colour in a Drawing

While working in the Stage view, you can use the Dropper tool to pick a colour from your drawing without going to the Colour view. When picking a colour with the dropper, the colour is not added to the swatch list. It is becomes the current colour.

To select a single colour in a drawing:

1. In the Tools toolbar, select the Dropper 🖋 tool, press [Alt] +[D] or select **Tools > Dropper** from the top menu.

5. In the Stage view, click the desired colour.

‣ If you are using another drawing tool, such as the Paint tool, you can temporarily hold down the [D] key and click in your drawing before releasing the key to pick your colour. Once you let go of the key, you will return to previous tool you were using.
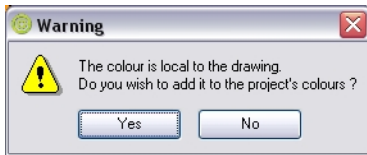
To select a composite colour:

1. In the Tools toolbar, select the Dropper ✎ tool, press [Alt] +[D] or select **Tools > Dropper** from the top menu. When enabled, the dropper picks the RGBA values of all the layers combined. When disabled, the dropper picks the RGBA value from just one layer at a time.

6. In the Tool Properties view, click the Sample All Layers ✎ button.

7. In the Stage view, position the dropper tip over overlapping strokes and click to select the colour.

   The new colour is displayed in the Colour view and becomes the current colour.

Composite colour
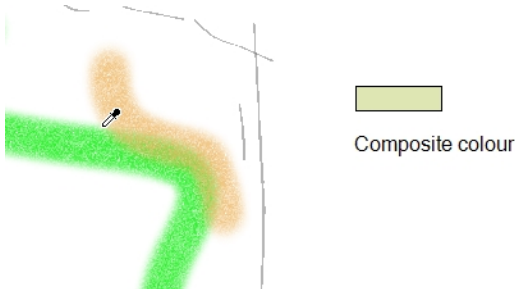
To select colours with/without transparency:

1. In the Tools toolbar, select the Dropper ✎ tool, press [Alt] +[D] or select **Tools > Dropper** from the top menu.

8. In the Tool Properties view, do one of the following:

   ‣ Click the Do Not Pick Transparency ⓐ button to select colours at 100% opacity, ignoring the alpha value.

   ‣ Do not click the Do Not Pick Transparency ⓐ button to select colours and retain the alpha value of the stroke.

9. In the Stage view, position the dropper tip over a stroke and click to select the colour.

   The new colour is displayed in the Colour view and becomes the current colour.

Editing Gradients and Textures

If you paint a zone with a gradient or texture colour, you can use the Edit Gradient/Texture ▢ tool to modify its position in the zone. You can move, scale, rotate and skew your texture.

To use Edit Gradient/Texture tool:

1. In the Tools toolbar, select the Edit Gradient/Texture ▢ tool or select **Tools > Edit Gradient/Texture.**

1. Click the Gradient or Texture zone to be modified. To modify several areas at once, hold down the Shift key and click in the zones to be modified.

Linear gradient   Radial gradient

2. Move the edit texture's anchor points to the desired result.
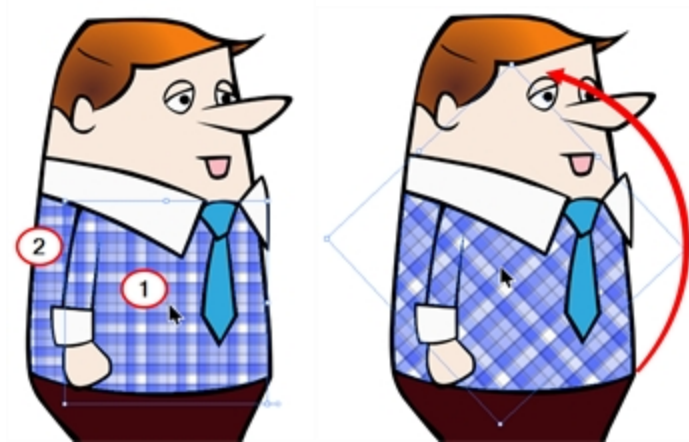
▸ If the same modification needs to be applied to another gradient in another drawing or texture zone, you can select the modified zone and select **Edit > Copy**. Select the zone to be modified in the other drawing and select **Edit > Paste**.

Closing Gaps Manually
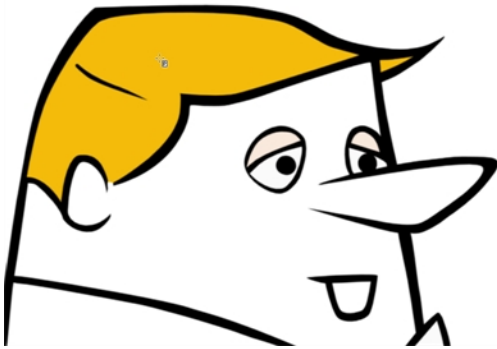
When painting, you will notice that some of your drawing areas are not closed. To close the zone you can either draw the missing line with the Brush or Pencil tool, but you can also close the gap with an invisible line. To do so, you will use the Close Gap ⬦ tool.

The Close Gap tool is used to close small gaps in a drawing. The Paint tool only paints closed areas. The Close Gap tool will create a small, invisible stroke between the two closest points to close the colour zone. You do not need to trace directly over the gap. You can draw it a few millimetres away and the Close Gap will automatically choose the two closest points and close the gap.

To use the Close Gap tool:

1. In the Tools toolbar, select the Close Gap ⬦ tool or select **Tools > Close Gap**.

   ▸ Click the Auto Flatten ⬦ button in the Tool Properties view if you want the stroke you will draw to be flattened in your drawing instead of being on top.

   ▸ You can display the invisible lines with the Show Strokes option under **View > Extras > Show Strokes** or press [K].

   ▸ If you do not display the strokes, a warning message dialog box will appear. Enabling the **Don't Show This Message Again** option prevents this Message from appearing.

2. In the Stage view, trace an invisible line near to the gap to be closed.

   The gap automatically closes.
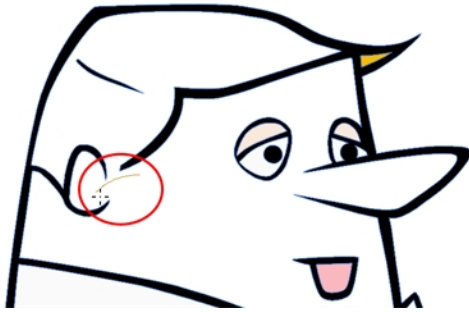
Preferences

Adjusting preferences to suit your techniques allows you to paint your drawings more efficiently.

To open the Preferences dialog box:

1. Do one of the following:

   ‣ Select **Edit > Preferences** (Windows) or **Storyboard Pro > Preferences** (Mac OS X).

   ‣ Press [Ctrl] + [U] (Windows) or [⌘] + [,] (Mac OS X).

In the Preferences dialog box are preferences related to adding colours to a project.

Tools
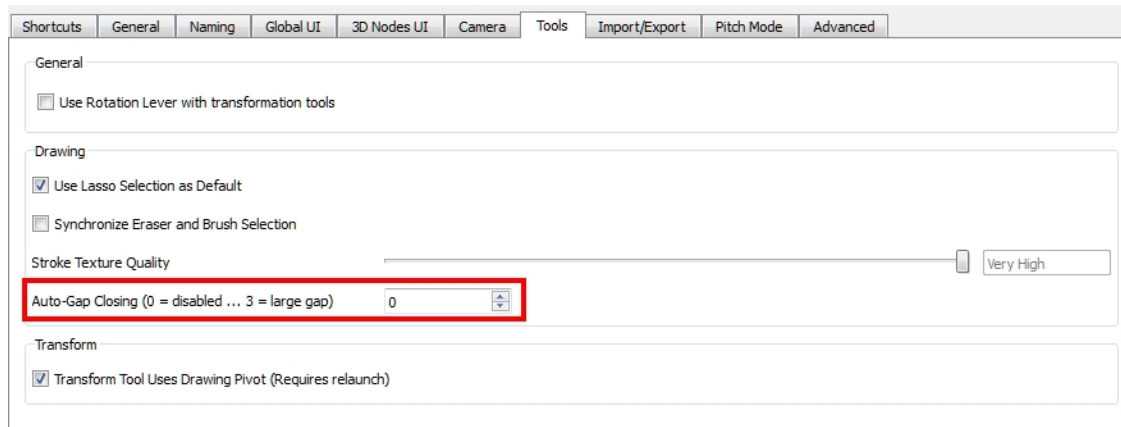
Auto Gap Closing

The values for automatic gap closing while painting drawings are:

- **0** = Disabled

- **1** = Small

- **2** = Medium

- **3** = Big

Chapter 9: Libraries

You can share and reuse any elements you create in Storyboard Pro using templates. Storyboard Pro has a library where you can store several different elements such as characters, sets, props, layers and camera moves.

This chapter includes the following topics:

Understanding the Library Concept

The Library view lets you reuse artwork and panels in other scenes and projects.

This section includes the following topics:

What is a Library?

A library is a folder where you store your templates. You can access these folders from different projects. Using the library is easy, just drag the content into the library to store your artwork and then drag it into your Camera, Timeline, or Thumbnails view where you want to reuse it. Organize your library using subfolders. You can keep several different library folders on your hard drive or network.

What is a Template?

A template is an individual copy of the artwork stored in the library. This artwork can be reused in different scenes. Once a template is stored in the library, you can access it from any project, as many times as needed.

Dragging a template into your project copies the content in it. It does not link it to the original, which means you can modify this individual copy.

Library View

The Library view is used to create and manage templates, as well as the folders containing them.

To display the Library view:

‣ Select **Windows > Library**.

Previewing the Contents of a Template

The library`s preview window lets you preview the contents of a template.

NOTE: Audio files cannot be previewed in the preview section of the library window.

To preview a template:

1. Click the down arrow button above the Quick Search section to expand the preview section.

2. Double-click the template you want to preview from the template list. You can also right-click the selected template and select **Preview Template**. You can also double-click a template from the template list while the preview section is collapsed to expand the preview section and preview the selected template at once.
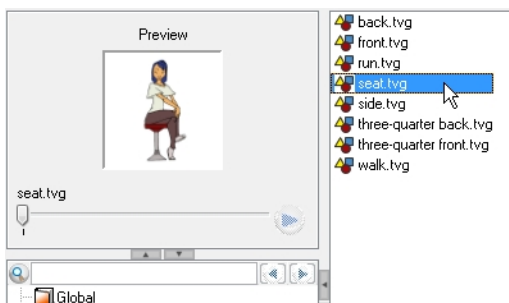
   ▸ When you created a template out of a panel containing a layer motion, click the **Play** ▶ button or drag the slider to scrub through the panel.

   ▸ When you created a template out of a sound, click the **Play** ▶ button to play back the sound.

Performing a Quick Search for Templates

You can use the Quick Search 🔍 field to rapidly locate a particular template using a keyword contained in the template's name.

To search for a template:

1. In the Quick Search field, type a word or part of a word contained in the template's name. You can select a folder in the Library's List to limit the search to this specific library.
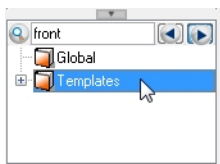
2. Press Enter/Return to validate.

   The first template found with the keyword you used is being selected and displayed in the right side of the Library view along with the other templates contained in the same folder.
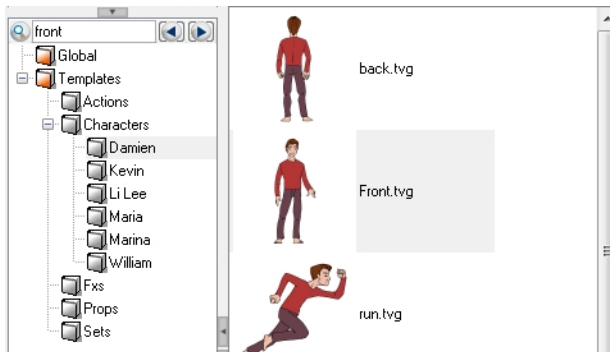
3. Click the Right Arrow ▶ button to find the next template containing the keyword, or on the Left Arrow ◀ button to see the previous result.
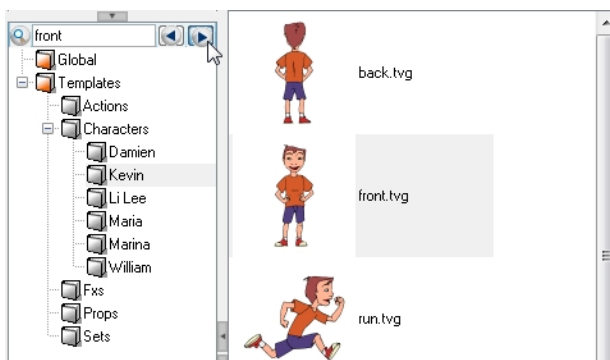
Displaying the Library List

The Library List is used to navigate through the different libraries and subfolders. You can also open, close and create new libraries from here.
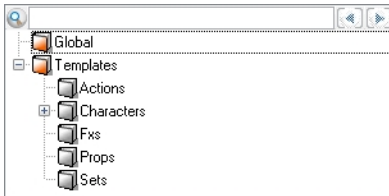
The Library view has two default Library folders:

- **Global**: This is an empty folder you can use to organize your templates. This library is automatically shared between different projects. You can organize this library folder using subfolders. When you save items in the Global library, it is saved by default to a location in your **Documents** folder on your machine.

- **Templates**: This folder contains default templates provided with Storyboard Pro and is stored on your hard drive. The content of this Library is automatically shared between the different projects.

> NOTE: To verify the path where files are being stored, hover your cursor over the folder to display the path

Displaying the Templates List

The templates contained in the selected Library list can be displayed on the right side of the Library view as thumbnails, in a list or as details.
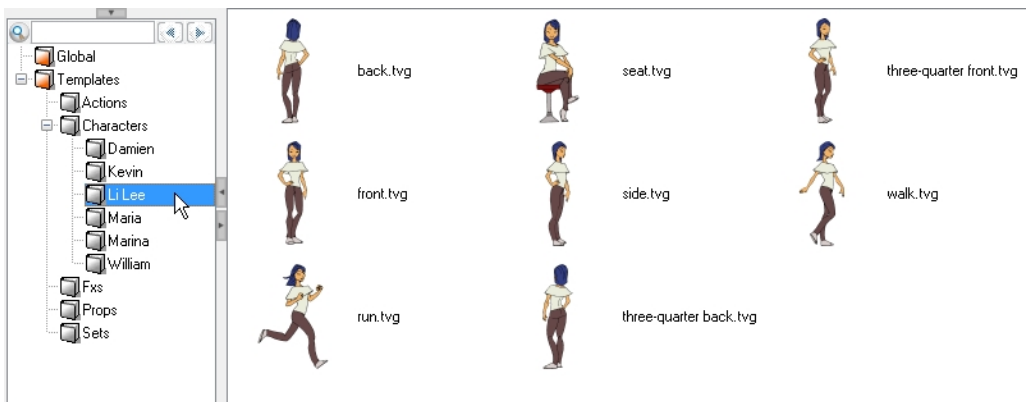
To access the Template display options:

▸ In the Library view's right side, right-click and select **View > List**, **Thumbnails** or **Details**.

Structuring the Library

As you will probably create a large number of templates, they will need to be organized. You can create different libraries and subfolders so you easily access your assets. For example, create a different library for each project and divide it into several categories, such as:

- Characters

- Props

- Backgrounds

- Panels

- Sound clips

- 3D objects

> **NOTE:** When you import a 3D object, it is added automatically to the Library—see *Adding 3D Objects to the Storyboard* on page 262.

This section includes the following topics:

- *Creating a Library* on page 314

- *Opening a Library* on page 315

- *Closing a Library* on page 315

- *Creating a Folder* on page 316

- *Refreshing the Library* on page 317

- *Generating Thumbnails* on page 317

Creating a Library

There are two ways to create Library folders.

- Using Storyboard Pro's interface

- Directly through your operating system

To create a library using your operating system, create a new folder with a relevant name in the location where you want the library to be stored. This can be opened in Storyboard Pro when you require it—see *Opening a Library* on page 315.

To create a library from Storyboard Pro:

1. In the Library view, right-click in the Library List section and select **Open Library**.

   The Browser window opens.

2. Browse for the location where you want to store your new library in your computer.

3. Click **Make New Folder**.

4. Name the new library with a relevant name and click OK.

   The new library appears in the Library List section.
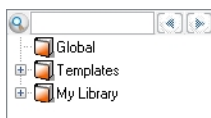
Opening a Library

You can open any folder on your hard drive or network as a library. Opening a library means linking the folder to your Library view. You only need to open the library once. The library folder is available every time you open the application until you decide to close the library and unlink it.

NOTE: Opening a folder that contains image files will allow you to quickly import those images into Storyboard Pro by dragging and dropping them into the Stage view.

To open a library:

1. In the Library view, right-click in the Library List section and select **Open Library**.

   The Browser window opens.

2. Browse to the location of the library folder.

3. Select the folder and click OK.

   The new library appears in the Library List section.

Closing a Library

You may not always require all of the library folders in the Library List. You can close the ones you do not need. Closing it does not delete the folder, it only unlinks it from the Library view. If you want to reopen it later, you only need to locate it on your hard drive or network and open it in the Library view.

To close a library:

1. On the right side of the Library view, select a library folder to close.

2. In the Library View menu, select **Folders > Close Library**.

Creating a Folder

Template libraries need to be organized. You can create different subfolders on your hard drive or directly in the **Library** view so that you can gain easy access to your assets.

See also:

- *Renaming a Folder* on page 316
- *Deleting a Folder* on page 317

To create a folder:

1. In the Library view's left side, select the library folder in which you want to create subfolders.

2. Right-click on the selected library and select **New Folder**.

   The new subfolder is added to the Library (although not immediately visible as it is collapsed in its parent folder). Click the root library folder containing the new folder and then click the plus (+) sign to expand it. The new subfolder appears.
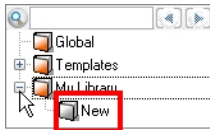
Renaming a Folder

Once you add a folder, you can rename it. This also renames the folder on your hard drive.

To rename a folder:

1. In the Library view's left side, select the folder to rename.
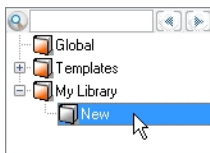
2. Right-click on the selected library and select **Rename Folder**.

3. Rename the selected folder.

4. Press Enter/Return to validate the operation.

Deleting a Folder

You can delete a folder from the library if its contents are no longer needed.

> **IMPORTANT:** ALL THE TEMPLATES CONTAINED IN THE FOLDER WILL BE DELETED FROM YOUR HARD DRIVE. **ONCE DELETED, THE DATA CAN NOT BE RETRIEVED**

To delete a folder:

1. In the Library view's left side, select the folder to delete.

2. Right-click the selected library and select **Delete Folder** or press Delete.

   A warning dialog box opens.
   ‣ Click **Yes** to delete the folder.
   ‣ Click **No** to cancel.

Refreshing the Library

If you update the content of your libraries through your operating system, you must refresh the library folders in the Library view.

To refresh a library:

‣ In the Library view's left side, right-click and select **Refresh** or press [F5].

Generating Thumbnails

When you display thumbnails in the Library view, the system generates a series of small images (thumbnails) for you. However, it is possible to generate template thumbnails manually—see *Deleting Thumbnails* on page 318.

To generate thumbnails:

1. In the Library view's right side, select the template that contains thumbnails you want to generate.
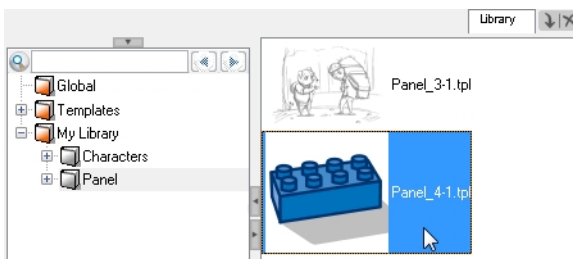
2. Right-click and select **Generate Thumbnails**.
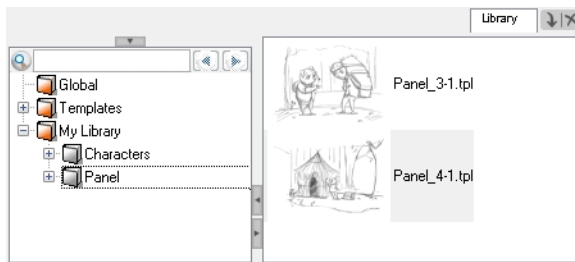
Refer to the *Automatically Generate Thumbnails in Library* on page 329 section to learn more about this topic.

Deleting Thumbnails

You can delete the thumbnails files from the Library view.

To delete thumbnails:

▸ In the Library view, right-click in the left section and select **Delete Thumbnails**.

Templates

If you want to reuse artwork, layer, or camera motions from your project in the same or other projects, you need to create a template out of it. A template can be seen as a portable scene or package that you can drag inside your project.

This section includes the following topics:

• *Creating a Template* on page 318

• *Deleting a Template* on page 321

Creating a Template

You can create a template out of many assets in your project. You can create templates from the Camera, Thumbnails or the Timeline view.

• *Creating a Template from the Stage View* on page 318

• *Creating a Template from the Thumbnails View* on page 320

• *Creating a Template from the Timeline View* on page 320

Creating a Template from the Stage View

From the Stage view, you can create a template from a panel's layer or a selection of layers. Note that if a motion was created on the selected layer, it will be included in the template.

To create a template from the Stage view:

1. In the Library view, select a folder to store your template.

2. In the Stage view, select one or more layer tabs and drag them to the right side of the Library view.
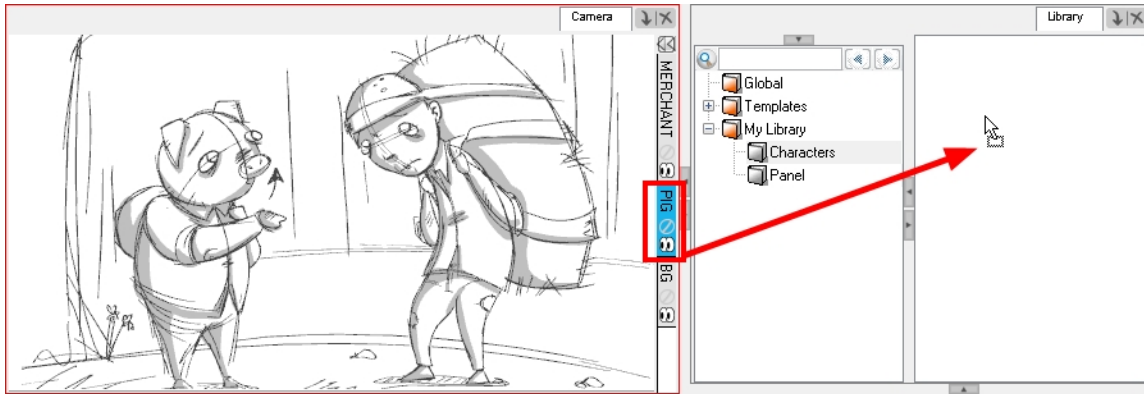
3. In the Rename dialog box, rename the new template. If you want to rename a template after it is created, right-click it and select **Rename**.

Creating a Template from the Thumbnails View

From the Thumbnails view, you can create a template from an entire panel. Note that if there is a layer or camera motion in the selected panel, it will be included in the template.

To create a template from the Thumbnails view:

1. In the Library view, select a folder to store your template.

2. In the Thumbnails view, select a panel and drag it to the right side of the Library view.
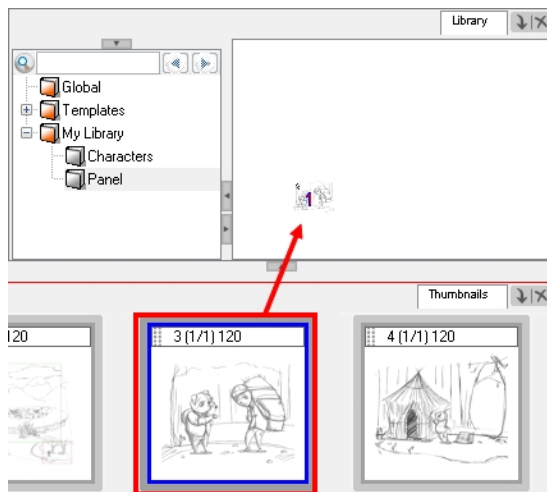
3. In the Rename dialog box, rename the new template. If you want to rename a template after it is created, right-click it and select **Rename**.

4. Click OK.
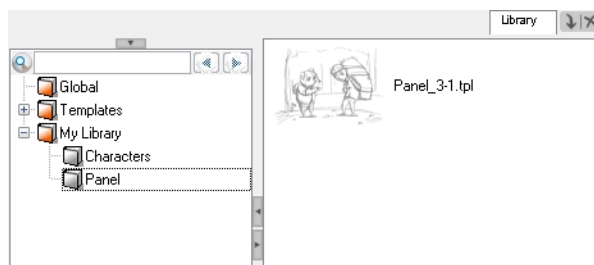
Creating a Template from the Timeline View

From the Timeline view, you can create a template out of an entire panel or a sound clip. Note that if there is a layer or camera motion in the selected panel, it will be included in the template.

To create a template from the Timeline view:

1. In the Library view, select a folder to store your template.

1. In the Timeline view, select a panel or sound clip and drag it to the right side of the Library view.
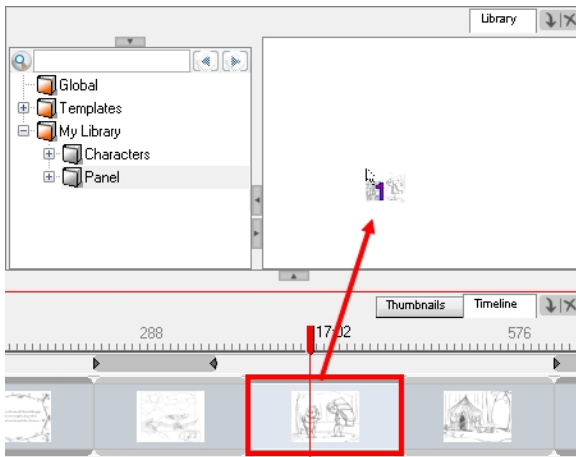
2. In the Rename dialog box, rename the new template.

   If you want to rename a template after it is created, right-click it and select **Rename**.

3. Click OK.
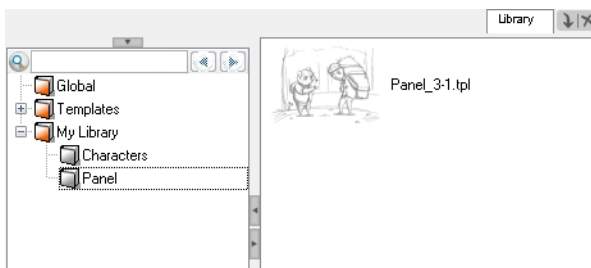
Deleting a Template

To delete templates from your library, use the Library view. You can always undo the delete action if necessary.

> IMPORTANT: DO NOT DELETE TEMPLATES USING THE OPERATING SYSTEM BECAUSE YOU WILL NOT BE ABLE TO UNDO YOUR ACTION.

To delete a template:

1. In the Library view, select the templates to delete.

2. Right-click on the selection and select **Delete** or press Delete.

Importing Files as Templates Using the Library View

Using the **Library** view, you can import several types of files and store them in a library folder as a template. Once you have these new templates, you can use them throughout your storyboard projects just like the regular ones.

This section includes the following topics:

Importing Image Files

You can import all sorts of image files using the Library view to reuse them throughout your projects as templates. You can import bitmaps as well as vector-based images, which can be really handy. The supported image formats include: *.ai, *.pdf, *.tvg, *.pal, *.scan, *.sgi, *. tga, *.yuv, *omf, *.psd, *.png, *.jpg, *.jpeg, *.bmp and *.tif.

To import an image file:

1. In the Library view, right-click a library folder and select **Import Files**.

   The browser window opens.

2. Find and select your image file and click **Open**.

   The selected file appears in the Library view as a `*.tpl` file inside the selected library folder.

   Props.tpl

Importing Audio Files

You can import three types of audio files, which you can drag in the Timeline view when creating your animatic project. The supported audio file formats are: *.wav, *.aif and *.mp3.

To import an audio file:

1. In the Library view, right-click a library folder and select **Import Files**.

   The browser window opens.

2. Find and select your audio file and click **Open**.

   The selected audio appears in the Library view as a `*.tpl` file inside the selected library folder.

Importing Adobe Flash Movie Files

You can import an Adobe Flash movie file, `*.swf`, into the Library view. The movie file will become a single layer template that contains the animation. Only the first 20 first frames of the animation will be imported in the template.

To import an Adobe Flash movie file:

1. In the Library view, right-click a library folder and select **Import Files**.

   The browser window opens.

2. Find and select your Adobe Flash Move file (`*.swf`) and click **Open**.

   The selected `*.swf` appears in the Library view as a `*.tpl` file inside the selected library folder.

> **NOTE:** You can preview the animation contained in the new template by using the preview section of the Library view–see *Previewing the Contents of a Template* on page 311.

Importing Templates from Harmony

You can import template (`*.tpl`) files made in Harmony 9.2 or higher into the Library. This can be useful for importing backgrounds created in Harmony directly into your storyboard.

> **NOTE:** As Stage is an animation software and Storyboard Pro is not, animated templates and templates of rigged puppets created in Stage may not import properly. Templates with multiple layers will retain their layer structure, but cut-out puppets may be rendered as flat objects with unmoving parts.

To import a template created in Harmony:

1. In the Library view, right-click in the left side of the Library view, under all the existing folders and select **Open Library**.

   A browser window opens.

2. From the browser window, search for a folder that contains the `*.tpl` file that you want to import. That folder is considered the "Library" that you chose to open. The `*.tpl` file itself is also a folder, so do not get confused. Select the Library folder and not the Template folder. For example, the library may be the Toon Boom Stage Library (found in the My Documents folder on Windows) and the name of the template inside **Enchanted_Forest.tpl**.

3. An orange book icon appears in the left side of the Library view with the name of the folder that you selected. Click it to see the templates on the right side of the Library view. The template thumbnails may take a moment to generate.

   If there were any subfolders in the root library folder, they will appear as grey books within the root library. You may need to expand the root library to see them. Click on one of these grey book subfolders to reveal its templates on the right side of the Library view.
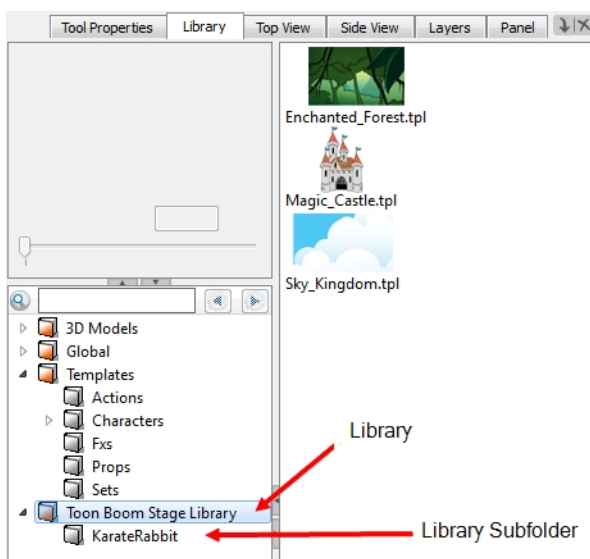
Importing 3D Object Files

You can import four types of 3D files, which you can drag in the Timeline view when creating your animatic project. The supported 3D file formats include: `*.osb`, `*.3ds`, `*.obj` and `*.fbx`. When you import a 3D model, it is automatically added to the Library in the 3D Models folder according to its format. You can then reuse that 3D model easily within your project file.

To import a 3D object file:

1. In the Library view, right-click the 3D Models library folder, and select **Import Files**.

   The browser window opens.

2. Find and select your the 3D file and click **Open**.

   The selected 3D file appears in the Library view in a folder labeled according to its format (ex.: OsbModels for `*.osb` files).

In addition to importing 3D objects into the 3D Models folder in the Library view, you can also open a folder containing 3D models as a library in the Library view. The models can then be dragged and dropped into the scene directly from the library and will be copied into the project's local 3D Models folder so that the model can be referenced in that project file.

To open a folder containing 3D models as a Library:

1. In the Library view, right-click somewhere in the left side of the Library view, under all the existing folders, and select **Open Library**.

   A browser window opens.

2. From the browser window, search for the folder that contains the `*.osb`, `*.3ds`, `*.obj` or `*.fbx` files that you wish to import. That folder is considered the "library" that you chose to open.

3. An orange book icon will appear in the left side of the Library view with the name of the folder that you selected. Click on it to see the templates contained inside on the right side of the Library view. The template thumbnails may take a moment to generate.

   If there were any other readable files in the same folder, such as `*.tga` files used for the 3D objects texture, they may appear in the new library as well.

4. From the right side of the Library view, select the 3D model's thumbnail and drag and drop it into your project, either in the Camera or Timeline view.

   A copy of the model will be copied into the appropriate models folder in the root 3D Models folder of the Library view. Although you can store 3D models in the Library view for easy accessibility, the project can only reference models found in the 3D Model folder of the Library view.

> **NOTE:** If your 3D template is animated, you can preview the animation by using the Preview section of the Library view. Refer to the *Previewing the Contents of a Template* on page 311 to learn how.

Inserting Templates in a Project

There are several ways you can insert templates in your project.

Inserting a Template in the Stage View

You can insert layers and panel templates into the Stage view.

To insert a template in the Stage view:

1. In the Thumbnails view, select the panel in which you want to insert the template.

2. In the Library view, select the template you want to insert.

3. Drag the selected template to the Stage view.
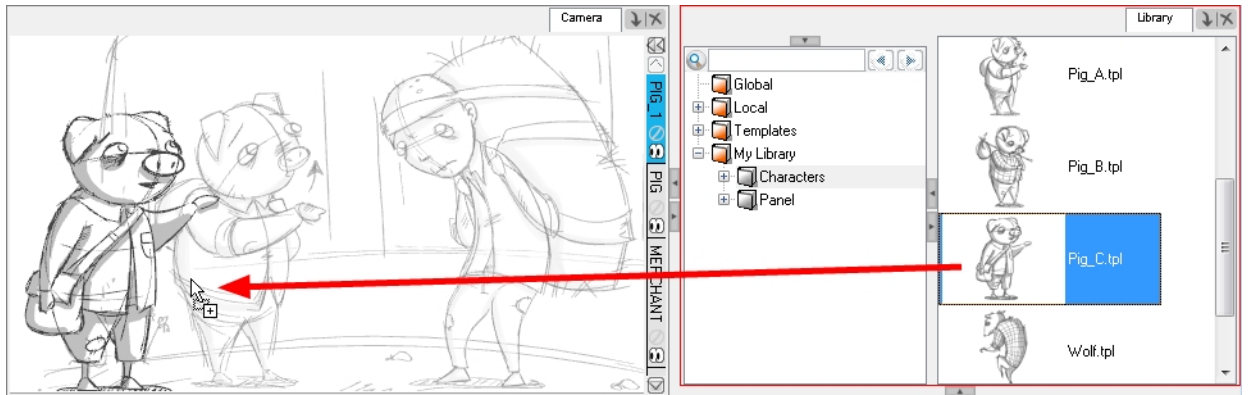
▸   If you drag a template of an entire panel into a selected panel, it will add all the content of the template into the existing selected panel.

Inserting a Template in the Thumbnails View

You can insert layers and panel templates into the Thumbnails view.

To insert a template in the Thumbnails view:

1. In the Thumbnails view, select the panel in which you want to insert the template.

2. In the Library view, select the template you want to insert.

3. Drag the selected template to the selected panel in the Thumbnails view.
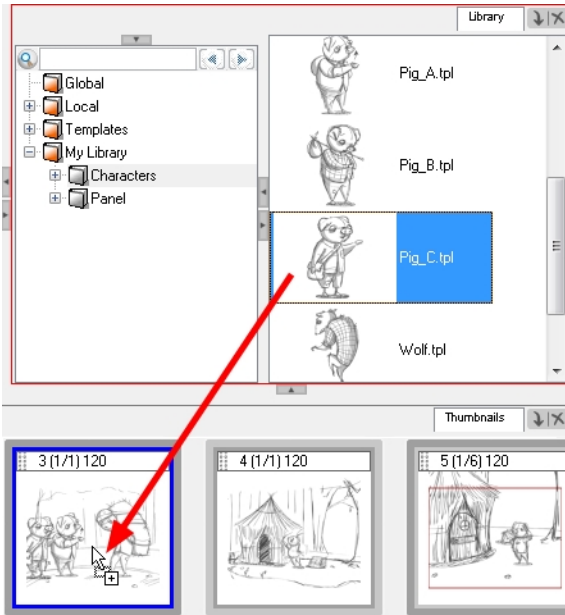
Inserting a Template in the Timeline View

You can insert layers, panel, and sound clip templates into the Timeline view.

To insert a template in the Timeline view:

1. In the Timeline view, select the panel in which you want to insert the template.

1. In the Library view, select the template you want to insert.

2. Drag the selected template to the selected panel in the Timeline view.
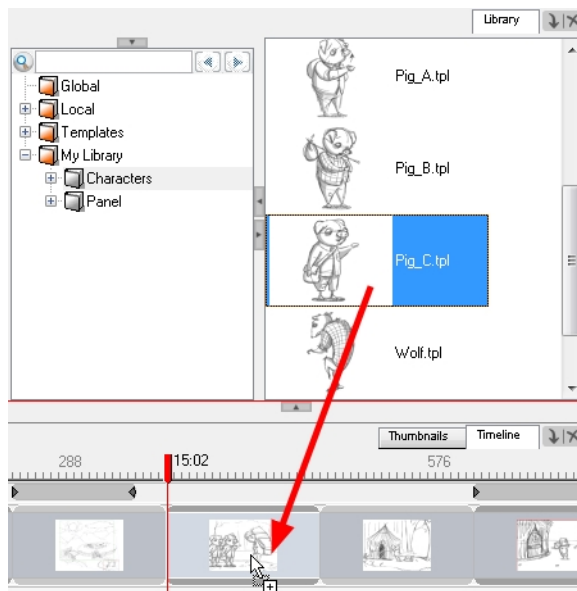
‣ If you are inserting a sound clip template, drag the template into a sound layer in the Timeline view.

Opening a Template as a Folder

Since a template is like a scene, you can open the template's folder and select elements inside it, such as specific drawings.

You may only want to import a few drawing layers instead of inserting the entire contents of a template. In this case, use the Open As Folder command to insert the items you want.

To open a template as a folder:

1. In the Library view, select the template to open.

2. Right-click the selection and select **Open As Folder**.
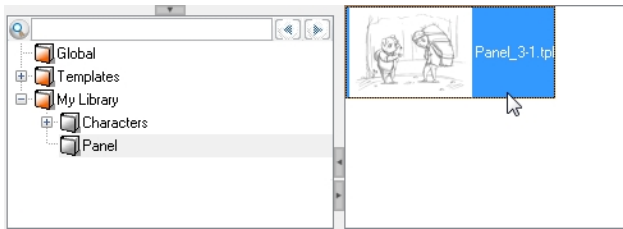
3. In the Library list, explore the template's folder to display its content.
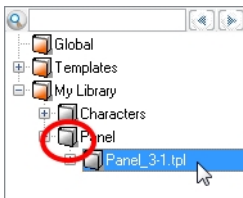
Automatically Generate Thumbnails in Library

In Storyboard Pro, you can select how the media files are displayed in the Library view for the entire project.

By default this option is enabled, this means that the thumbnails in the Library view will be automatically generated. You can disable this option as to prevent the thumbnails from being automatically generated.

To open the Preferences dialog box:

1. Do one of the following:

   ▸ Select **Edit > Preferences** (Windows) or **Storyboard Pro > Preferences** (Mac OS X).
   ▸ Press [Ctrl] + [U] (Windows) or [⌘] + [,] (Mac OS X).
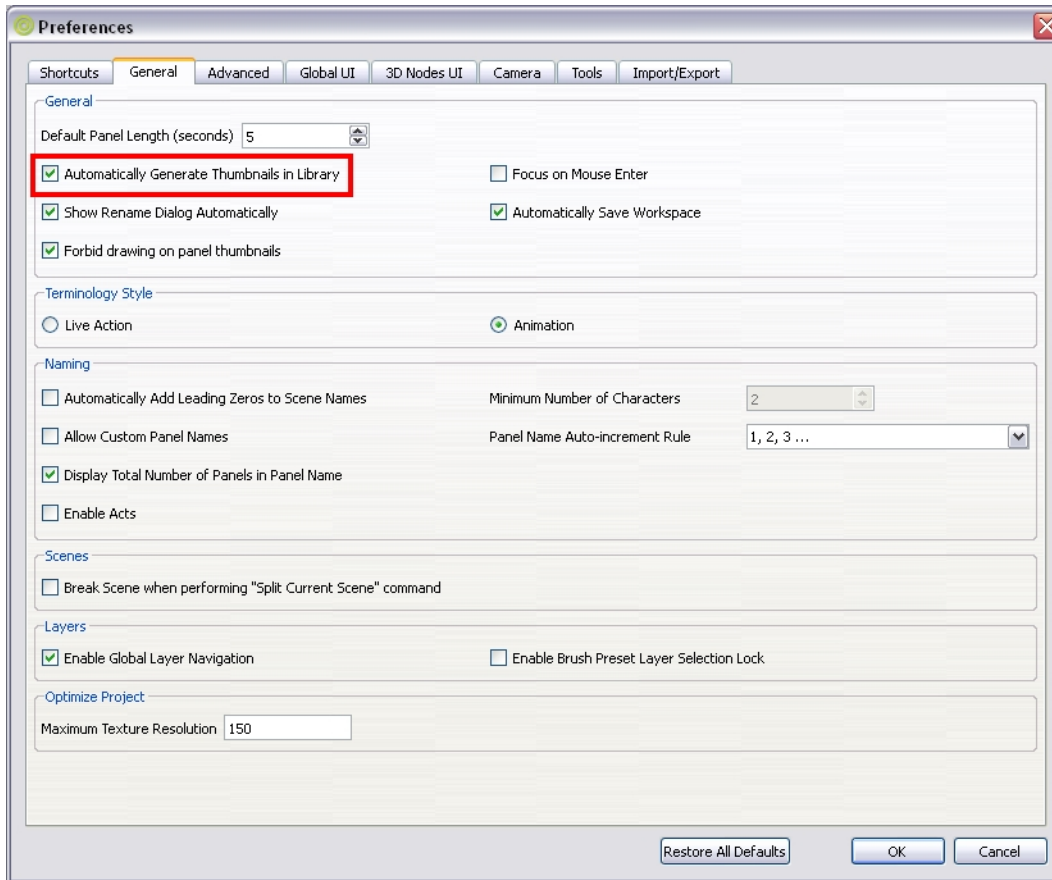
2. Select the **General** tab.

3. In the General section, select the **Automatically Generate Thumbnails in Library** option.

NOTE: When you deselect the Automatically Generate Thumbnails in Library option, you can manually generate them–see *Generating Thumbnails* on page 317.

Chapter 10: Animatic
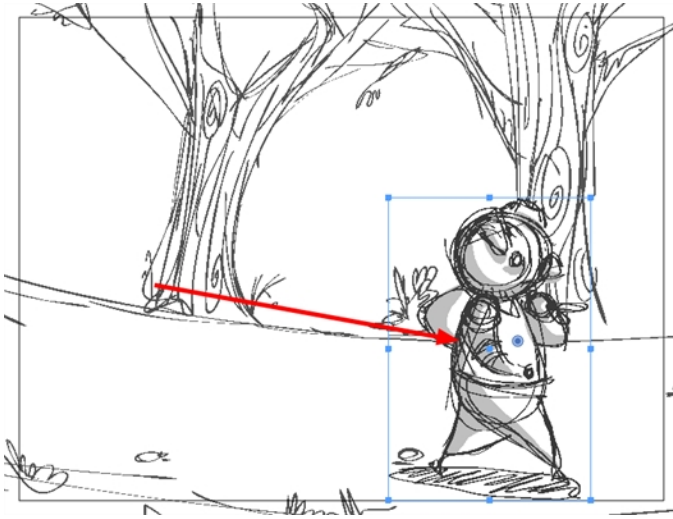
An animatic is the next step in the storyboarding process which involves adding sound, camera movements, animation, and scene transitions.

Storyboard Pro has all the tools necessary to synchronize your storyboard with sound, add camera and layer movements, and transitions before you export to the final video format.

This chapter includes the following topics:

> **NOTE:** This chapter explains the 2D functions of storyboard animatics. Refer to *Working in a 3D Space* on page 257 to learn how to create 3D movements with 2D layers and 3D models, as well as how to set up 3D Camera moves.

Timeline View

The Timeline view is where you assemble the timing of your scene's visuals and sounds. You can add sound track layers to this timeline, as well as edit audio files imported into the sound tracks. You can also add transitions and control the playback of a selected panel or the entire storyboard from this view.

When setting up your animatic in Storyboard Pro, you will want to be in the Timeline view, so you can easily change the duration of your panels, add sound and transitions, and play back your animation with a display of the time or frames—see _Adding a View_ on page 70.

NOTE: By default, timecode format is used to display the timing in the most accurate manner. The starting timecode of your project is set to 00:00:00.00. However, sometimes it may be best to use the number of frames as a timing value and a later timecode value as the start of your project. You can modify the format and default starting time code value via the Preference dialog box—see _Preferences_ on page 407.
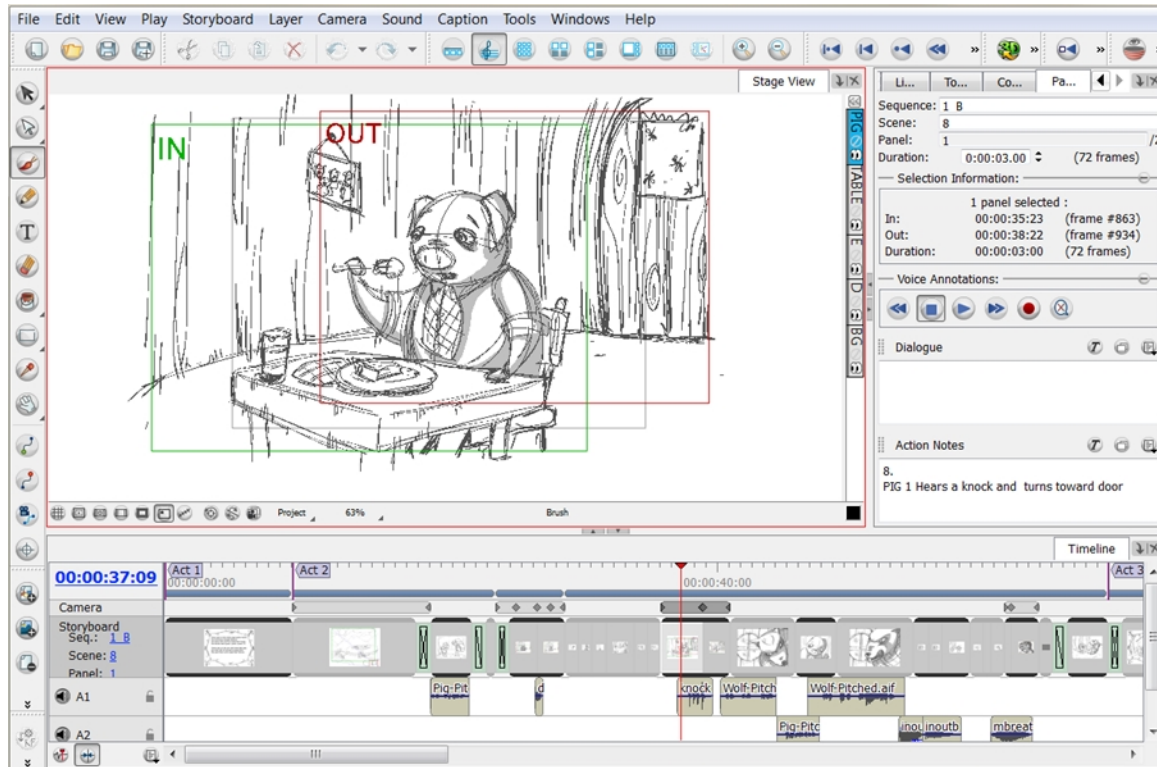
To enable the Timeline view, do one of the following:

▸ Select **Windows > Timeline**.

▸ In Workspace toolbar, select **Timeline**.

▸ Press [4].
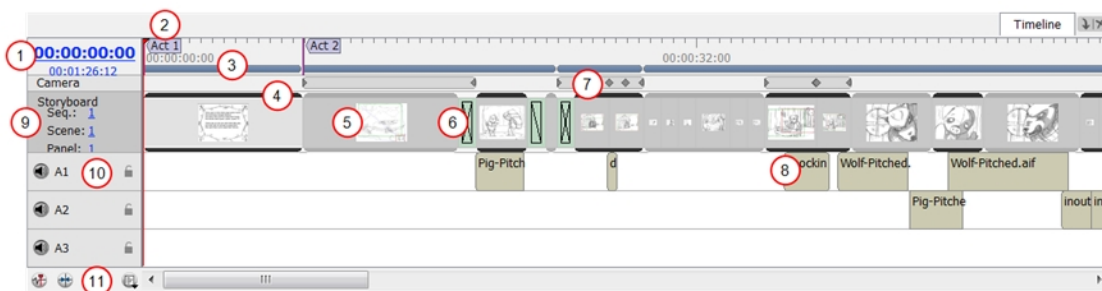
1. The current timecode (time marker's position) is always displayed in the top-left corner of the Timeline view. Under the current timecode, the total duration of the project is displayed. You can click and drag the timecode to scroll through your project.

2. The names and beginnings of the different acts are displayed as little flags at the top of the Timeline view.

3. Sequences contained in your project are displayed as blue bars.

4. The different scenes of your project are represented by grey frames at the top and bottom of the panels.

5. The different panel blocks display a thumbnail at their centre.

6. Transitions are displayed as green rectangles between scenes.

7. Camera movements are displayed as grey bars in the Camera row and keyframes as darker grey diamond shapes.

8. The audio blocks are below the scenes.

9. The current sequence, scene, and panel names are displayed at the beginning of the panels' row. You can click the names and drag the cursor left or right to scroll through your project.

10. The soundtracks names as well as Mute and Lock icons are displayed at the beginning of the Timeline view.

11. Sound options are available at the bottom of the Timeline view for easy access.

Changing the Panel Duration

When panels are initially created, they are of a default length of 1 second, displayed in timecode format. When it comes to your animatic, you will want to be more accurate. Modifying the duration of a particular panel is key when working out timing. There are a few different ways to accomplish this.

This section is divided as follows:

> **NOTE:** By default, timecode format is used to display the timing in the most accurate manner. The starting timecode of your project is set to 00:00:00.00. However, sometimes it may be best to use the number of frames as a timing value and a later timecode value as the start of your project. You can modify the format and default starting time code value via the Preference dialog box–see *Preferences* on page 407.

Visually Setting the Panel Duration

In the Timeline view, it is very easy to change the duration of a panel just by dragging to resize it. This way you can easily see the length of your panels in relation to one another.

There are two ways to resize a panel in this way, depending on how you want the change to affect subsequent panels.

Resizing a Panel in the Timeline and Shifting All Other Panels Down

To resize a panel in the Timeline view and shift all other panels down:

Use this method when you are not concerned about modifying the position of all subsequent panels.

1. Place the cursor over the end (right side) of a panel.

   The resize icon displays.

2. Drag the edge of the panel left or right to set the desired length. Using this method, all subsequent panels will be shifted along with the selected one.
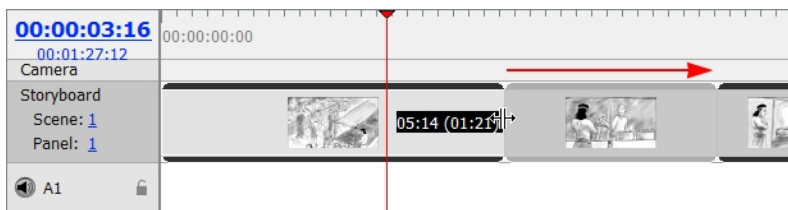
While you drag, the new duration of the panel as well as the difference between the former duration are displayed in a black box for accuracy. This value can be displayed in either frames or timecode.

Resizing a Panel While Only Affecting the Next Panel

To resize a panel while only affecting the next panel:

Use this method if you need to keep subsequent panels exactly where they are.

1. Place the cursor over the end (right side) of a panel.

The resize icon displays.
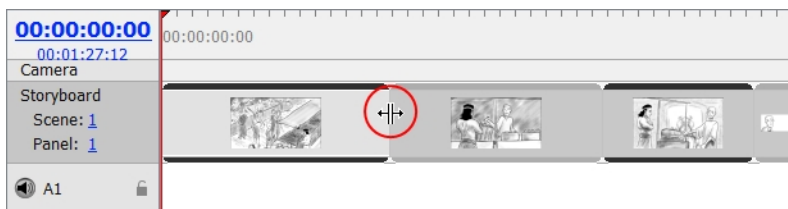
2. Hold the [Alt] key, then drag the edge of the panel left or right to set the desired length. Only the panel directly after the selected panel will be changed.
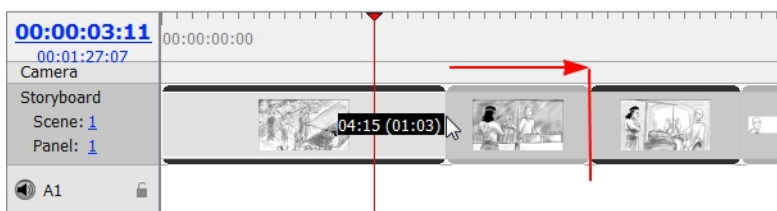
Setting the Panel Duration in the Panel View

A very accurate way of setting the duration of a panel is to use the Panel view. The Panel view will display, amongst other things, the exact Time Code information for the selected panel.

335
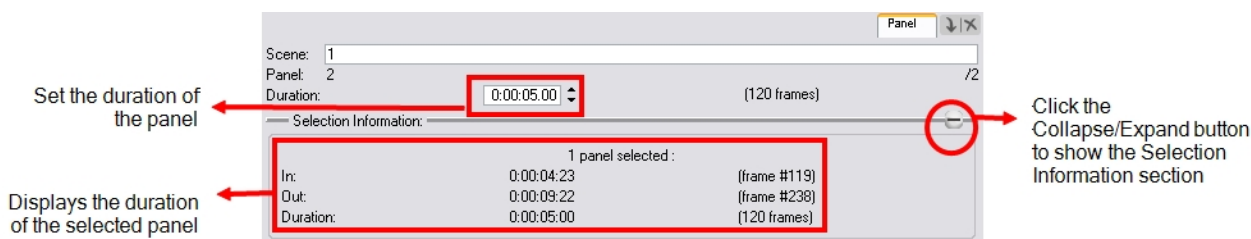
To set the panel duration in the Panel view:

1. In the Timeline or Thumbnail view, select a panel to adjust.

2. Go to the Panel view.

3. In the Duration field, use the up and down arrows or directly type a value to make the selected panel longer or shorter.

Setting the Panel's In or Out to the Current Frame

You can adjust the duration and position of a panel by moving its in and out points to a specific frame determined by the current position of the playhead.

> **NOTE:** Note that the frame you specify must be contained within the current position of the panel you want to change the in or out point of.

To set the panel's in point to the current frame:

1. In the Timeline view, drag the red playhead to the position where you want the panel to start.
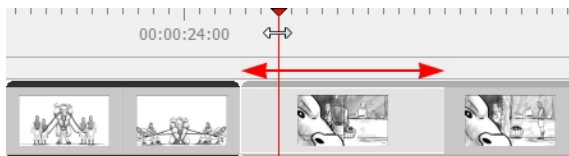
2. Select **Storyboard > Move Panel In to Current Frame**. You can also right-click on the selected panel and select **Move Panel In to Current Frame**.

   The selected panel's in point is pushed to the new position, resulting in the previous panel being extended to this point.

To set the panel's out point to the current frame:

1. In the Timeline view, drag the red playhead to the position where you want the panel to end.

2. Select **Storyboard > Move Panel Out to Current Frame**. You can also right-click on the selected panel and select **Move Panel Out to Current Frame**.

The selected panel's out point is pushed to the new position, shortening its duration.
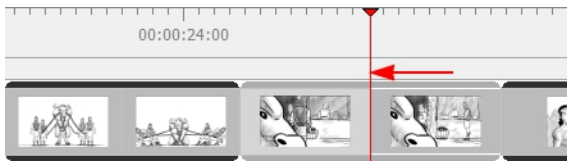
Splitting Panel at the Current Frame

You can split your current panel into two pieces. Following this operation, you will have two identical panels generated from the original. All elements, including layers, will be in both panels. Each panel's length will be determined by where you have the red playhead when you perform the operation.

To split panel at current frame:

1. In the Timeline view, drag the red playhead to where you want the panel to be split.
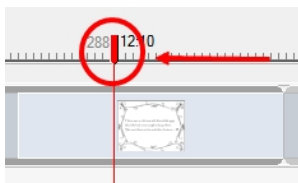
2. Do one of the following to split the panel:

   ▸ From the top menu, select **Storyboard > Split Panel At Current Frame**.

   ▸ In the Timeline view, right-click in your selected panel and select **Split Panel At Current Frame**.

The selected panel's out point is pushed to the new position, shortening its duration.
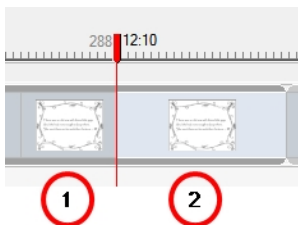
Your panel is split into two pieces, precisely where the red playhead is positioned.

NOTE: You may have to adjust any layer transformations you created before splitting the panels.

Selecting All Panels Forward

By using a series of keyboard shortcuts, it is possible to select a panel and all the panels following it at once. These options are also available on audio tracks—see *Sound* on page 385.

There are four possible options:

• *Selecting All Panels Forward* on page 338

Selecting All Panels Forward

To select all panels forward:

1. In the Timeline view, click the leftmost panel to select it.

2. Hold [Ctrl]+[Alt]+[Shift] (Windows) or [⌘]+[Alt] (Mac OS X) and click the panel from which you want the selection to start.

   The panel, and all the panels following it, up until the end of the storyboard project are selected at once.

   ‣ If you drag the selection forward, the panel preceding the selection will be extended.

   ‣ If you drag the selection backward, the panel preceding the selection will be reduced until it reaches the minimum length allowed (one frame). Then the second panel preceding it will be reduced.

Selecting All Panels and All Audio Clips Forward

To select all panels and all sound clips forward:

1. In the Timeline view, press [Ctrl]+[Alt]+[Shift] (Windows) or [⌘]+[Alt] (Mac OS X) and click the panel from which you want the selection to start.

   The panel and all the panels following it, up until the end of the storyboard project, as well as all the sound clips in all audio tracks starting from where the play head is positioned are selected at once and can be moved together.

   ‣ If you drag the selection forward, the panel preceding the selection will be extended.

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‣ If you drag the selection backward, the panel preceding the selection will be reduced until it reaches the minimum length allowed (one frame), then the second panel preceding it will be reduced. Overlapping audio clips will be overwritten by the ones that are selected.

Locking the Scene Duration

You can lock the duration of all scenes in your project with the Lock Scene Duration command. This ensures that the current length of every scene is preserved when adding, duplicating, or deleting panels.

To lock the scene duration:

1. Select **Storyboard > Lock Scene Duration**.

> **NOTE:** You can add a custom keyboard shortcut to this option through the Preferences dialog box or use the Lock Scene Duration button in the Storyboard toolbar extra buttons.

2. Once your scene duration is locked:

‣ Adding a panel using the New Panel or Smart Add Panel command reduces the size of the selected panel to make room for the new one. If the selected panel's length is one frame, the panel length cannot be reduced and therefore the new panel cannot be inserted in the scene.
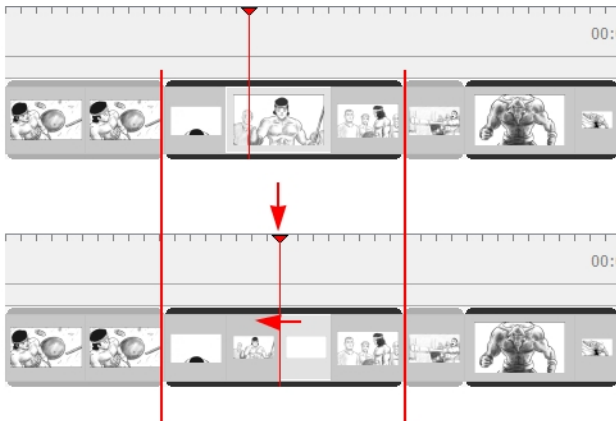
‣ Deleting or cutting one or more panels causes the preceding panel's length to extend to fill the gap and preserve the scene's duration. Cutting or deleting a scene or all the panels on a scene will not let you preserve the scene's duration.
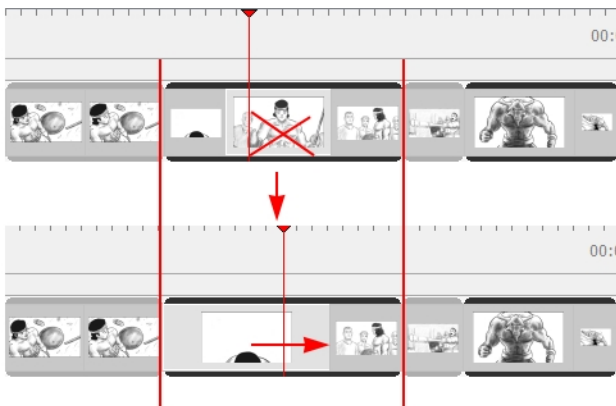
‣ Duplicating a single panel using the Duplicate Panel command will reduce the length of the selected panel to make room for the duplicated one. Duplicating multiple panels will not keep the scene's duration.
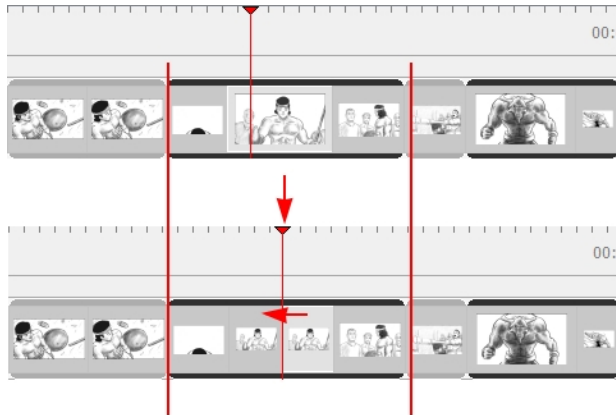
‣ Copying and pasting panels, adding a scene or a sequence, or deleting an entire scene will not preserve scene duration.

‣ Manually changing the duration of a panel is still permitted and will modify the scene duration.

Setting the Camera Frame

Each panel in your storyboard will, by default, have a camera frame set to the animation standard of 12 fields. In this section, you will see what the camera frame looks like and how to modify the size and position of the camera.

This section includes the following topics:

In the Stage view, the camera is displayed as a frame that matches the aspect ratio of your chosen resolution—see *Stage View* on page 56.
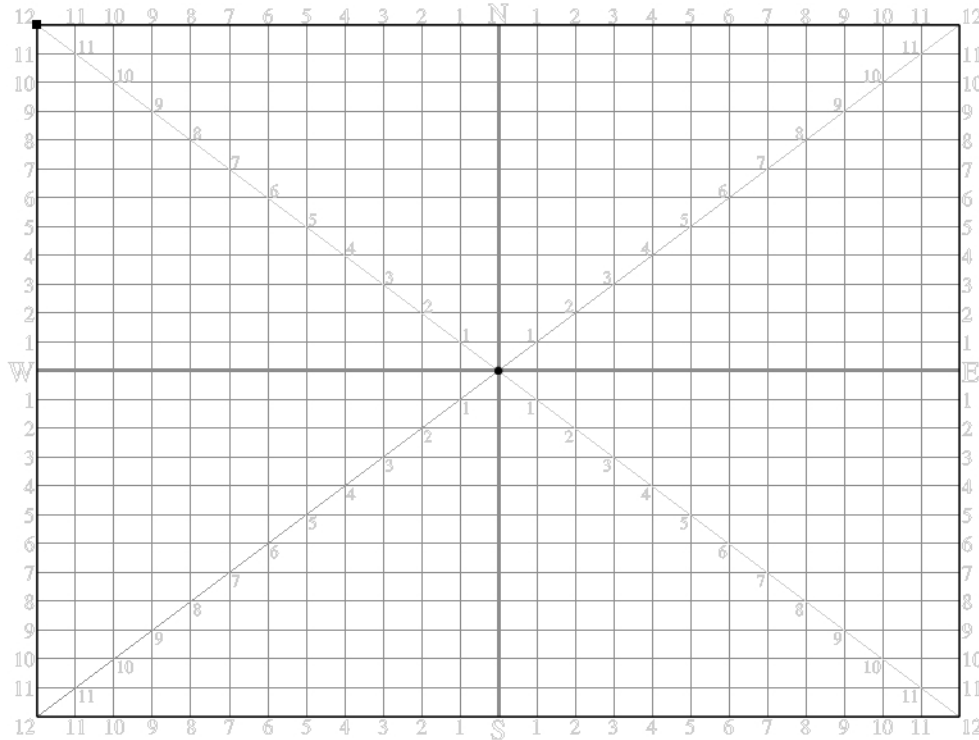
Camera frame with the 12-field grid.
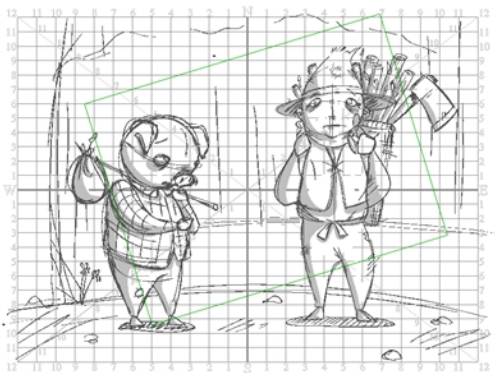
As seen in the Stage view

Snapshot of the same scene exported to a bitmap image with Static Camera preserved.

Camera Status Bar

The Camera status bar appears at the bottom of the Stage view and contains shortcuts to tools used most often when at the animatic stage of the storyboarding process.

This status bar is visible by default, but you hide it via the Preferences dialog box under the Camera tab—see *Stage View* on page 56.

Camera Tool

Use the Camera tool when you want to make any changes to the framing of scenes or panels.

You can find the Camera ![icon] tool in the Tools toolbar or from the top menu (**Tools > Camera**).

You will use the Camera tool to move the Static Camera and also when you are setting keyframes to animate it over time.

2D Static Camera

The term *Static Camera* is used to describe the framing of an entire scene, where there are to be no changes over time; when the camera is not moving. In this section, you will learn how to position the Static Camera in a 2D space.

This section includes the following topics:

- *Setting the Static Camera with the Camera Tool* on page 342
- *Setting the Camera Frame* on page 340
- *Copying the Static Camera from One Scene to Another* on page 344
- *Resetting the Static Camera* on page 345

You can also set up the Static Camera using the 3D space–see *Working in a 3D Space* on page 257

Setting the Static Camera with the Camera Tool

You do not need to create keyframes when making changes to the Static Camera. Any changes you make to the Static Camera affect the entire scene.

To position the Static Camera using the Camera tool:

1. In the Timeline view, select a panel within the scene in which you want to adjust the camera.

2. From the Camera toolbar or the Tools menu, select the Camera ![icon] tool.

   Once the Camera tool is active, your scene's camera frame will become visible and be represented by a black box. The default camera frame is set to 12 fields.

3. Do one of the following to modify the Static Camera:

   ‣ To position the selected keyframe along the Z-axis to create a truck in or truck out movement, drag the top-left corner of the frame when you see the Truck ![icon] icon. If you want to modify the Zoom level, use the Field of View field in the Tool Properties view.
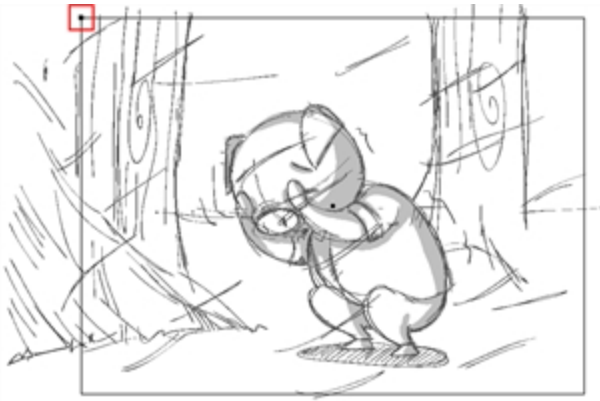
‣ To rotate the Static Camera, drag the top-left corner of the frame when you see the Rotation ↻ icon. Holding the Shift key while rotating the camera frame constrains the rotation to 15 degrees increments.
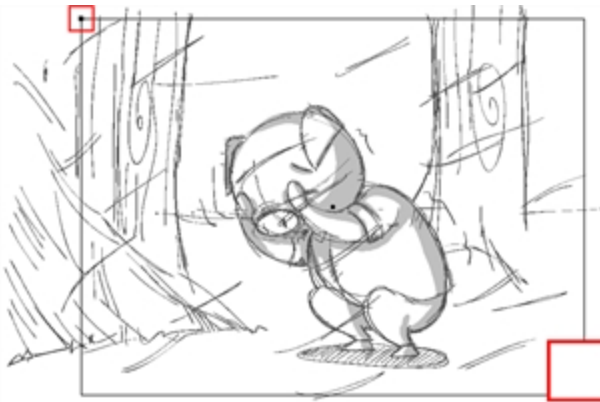
‣ To move the Static Camera, drag the frame from the centre pivot point or the outer edge of the camera frame when you see the Drag ✛ icon. Holding the Shift key while dragging the camera frame constrains the movement either horizontally or vertically.

NOTE: You can also set up the Static Camera position using the Camera Tool Properties—see *Camera Tool Properties* on page 348

Copying the Static Camera from One Scene to Another

If you need to reuse a camera position, you can copy and paste it from one scene to another. It is not necessary to have the Camera tool selected to perform this operation.

To copy the camera position from one scene and paste it into another:

1. In the Timeline view, select the scene from which you want to copy the Static Camera.

2. Select **Camera> Copy Camerafrom Selected Panels**.

The Static Camera in this scene is displayed in green because the Camera tool is not active

3. Once again, from the Timeline view, select the scene to which you want to paste the copied camera information.
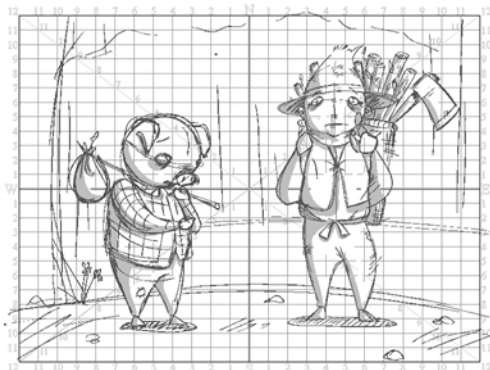
In this scene, the Static Camera is still set to its default 12 fields, displayed here as a black frame

4. Select **Camera > Paste and Fit Cameraon Selected Panels**.
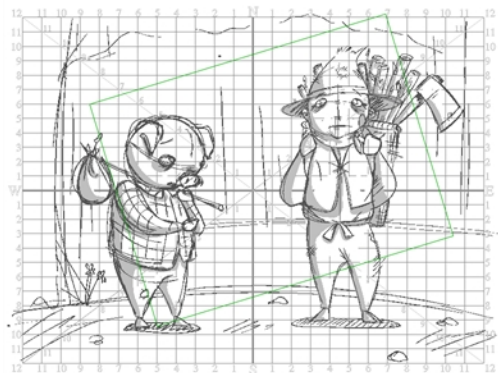
Now this scene has the same Static Camera as the original

Resetting the Static Camera

You can always revert to the original Static Camera.

1. In the Timeline view, click to select the scene where you want to reset the Static Camera.

2. Select **Camera > Reset Camera** or click the Reset Camera ![icon] button in the Camera Tool Properties view.

Reframe Tool

The Reframe ![icon] tool allows you to set the position of the content of the panels for the entire scene so it fits the camera frame you define.

NOTE: Note that when setting the camera frame using the Reframe tool, it is not possible to reset it to its former position.

To position the camera frame using the Reframe tool:

1. In the Timeline view, select a panel within the scene in which you want to adjust the camera.

2. From the Camera toolbar or the Tools menu, select the Reframe ![icon] tool.

   The camera frame switches to an orange bounding box .
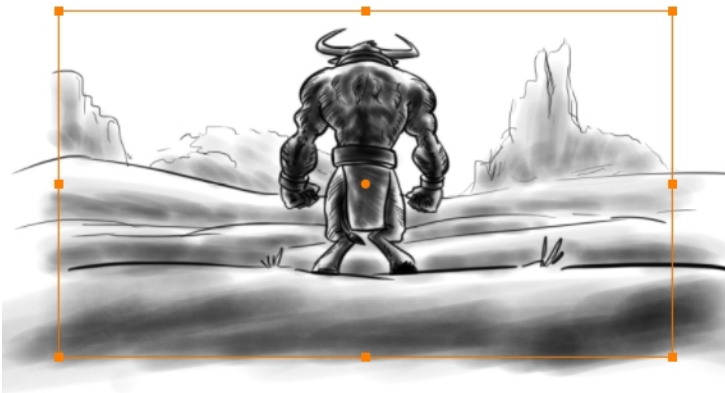
3. Do one of the following to modify the frame:

   ‣ To rotate the camera frame, drag the top-left corner of the bounding box when you see the Rotation ![icon] icon. Hold down the Shift key while rotating the camera frame to constrain the rotation to 15-degree increments.

   ‣ To move the camera frame, drag the bounding box from the centre pivot point or the outer edge when you see the Drag ![icon] icon. Hold down the Shift key while dragging the camera frame to constrain the movement horizontally or vertically.
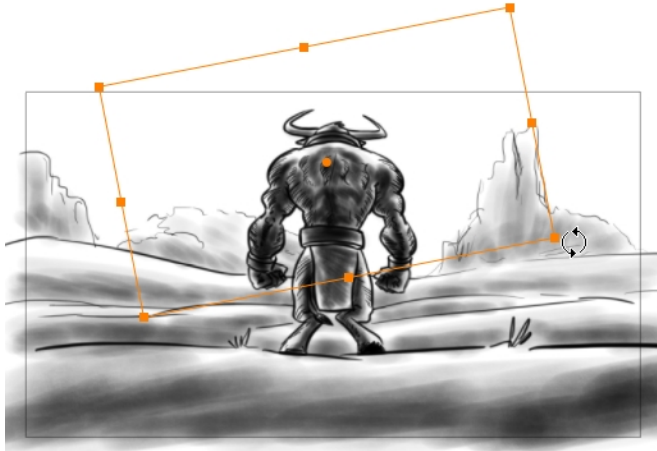
4. From the Reframe Tool Properties view, click the Apply [icon] button to apply the modification or click the Cancel [icon] button to cancel the modification.

   If you applied the modification, the position of the content of the panels for the entire scene will be set to fit the new camera frame.
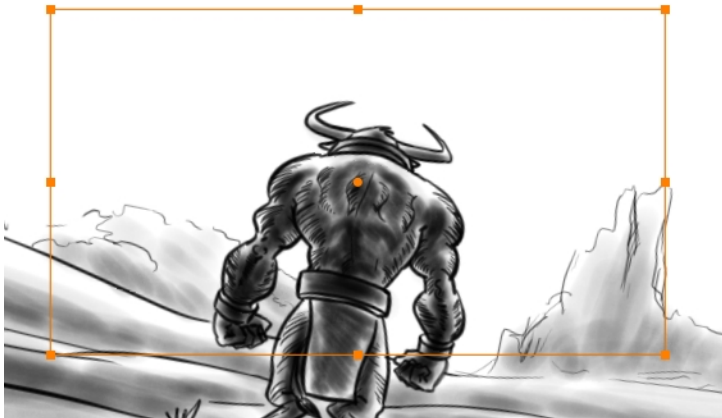
Animating the Camera

In Storyboard Pro, you can enhance your animatics by adding camera movements to the scenes. You can restrict camera movements to one panel, or spread it out across an entire scene/shot. An example of a camera movement would be if you wanted the camera to go from a wide shot and then zoom in to a close up.

Camera movements are created in much in the same way as setting the Static Camera frame, but you will work with keyframes in the Timeline view to set the different camera positions over time. Once again you will use the Camera tool to animate the camera.

An example of a camera movement would be if you wanted the camera to go from a wide shot and then zoom in to a close up.
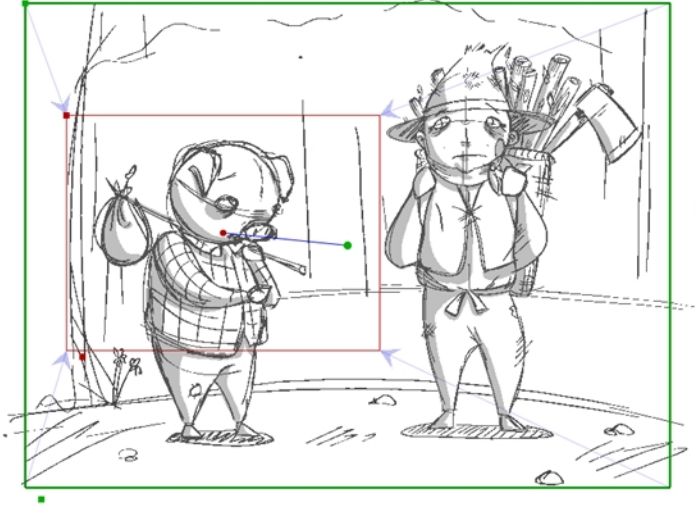
In this example, the camera starts further out (green frame) and zooms in on the character on the left (red frame).

This section is divided as follows:

Camera Tool Properties

When the Camera tool is selected, its properties and options are displayed in the Tool Properties view, which you will use to animate the camera.
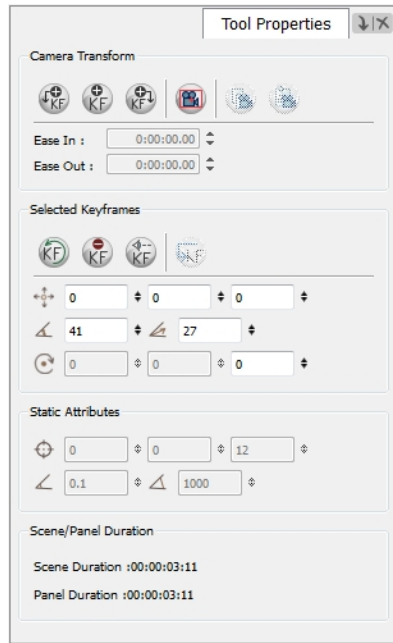
⊕ Add Keyframe at the Beginning of Current Panel

This button adds a keyframe to the beginning of the currently selected panel. This button is also available from the Camera toolbar.

⊕ Add Keyframe at Current Panel

This button adds a keyframe to the current frame. The current frame is determined by the position of the red playhead on the Timeline. This button is also available from the Camera toolbar.

⊕ Add Keyframe at the End of Current Panel

This button adds a keyframe at the end of the currently selected panel. This button is also available from the Camera toolbar.

Reset Camera

This button deletes all keyframes in the currently selected scene.

Copy Camera from Selected Panels

This button copies a selected camera keyframe from a selected panel. This button is also available from the Camera toolbar—see _To use the Copy and Paste commands to add keyframes:_ on page 354

Paste and Fit Camera on Selected Panels

This button pastes a copied camera keyframe in a selected panel. This button is also available from the Camera toolbar—see *To use the Copy and Paste commands to add keyframes:* on page 354.

Ease In/Ease Out

Use these operations to set or change the easing properties of your camera animation—see *Easing In or Out* on page 367.

Reset Selected Keyframe

This button resets the selected camera keyframe.

Delete Selected Keyframe

This button deletes the selected camera keyframe.

Align Camera Key with Stage View Position

This button fits the camera frame to the current space available in the Stage view while retaining its original ratio, which is very useful in 3D scenes. This command is also available from the top menu, **Camera > Align Camera Key with Stage View Position**.
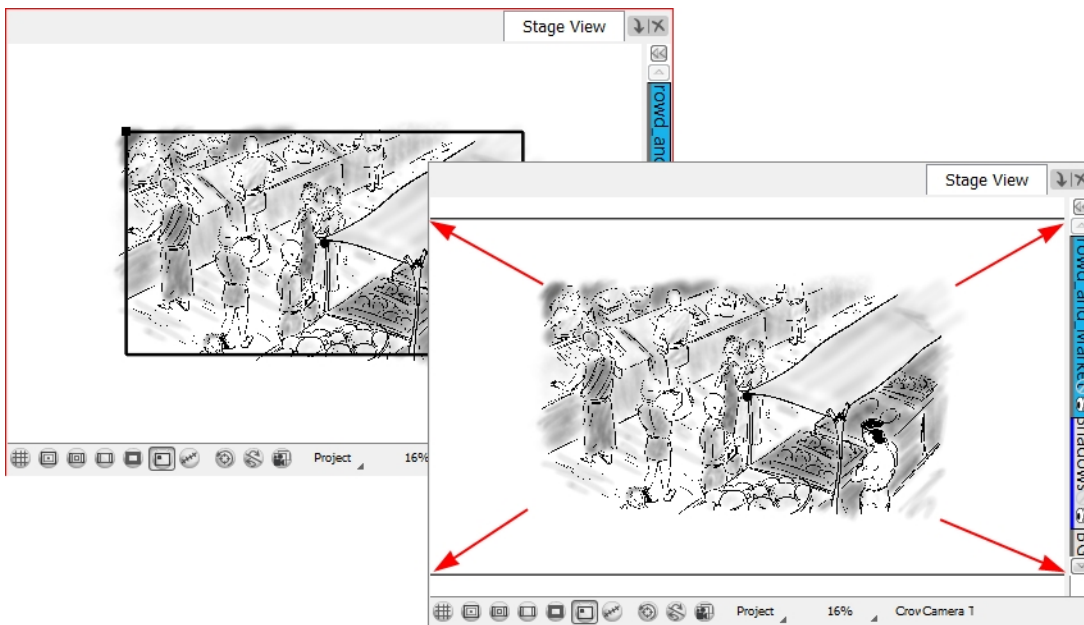
Go to Selected Keyframe

This button moves the red playhead to the selected keyframe in the Timeline view. When working in 3D and used in combination with the Camera view, this option comes in very handy for properly frame a shot—see *Working in a 3D Space* on page 257

Offset
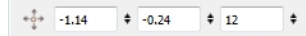
Using these fields, you can set the position of the camera frame centre point. The fields represent, respectively, the X position, Y position, and Z position (enabling you to animate a truck in or truck out movement). You can also use the Camera ▪ tool to position the camera frame from the Stage or Camera view—see *Setting the Camera Frame* on page 340

Field of View and Focal Length

Using these fields, you can set the camera field of view and focal length value . By default the field of view value is set to 41 degrees and the focal length value is set to 36 millimiters. The field of view lets you animate a zoom in or zoom out movement as the focal length determines the angle value of the shot.

Rotation
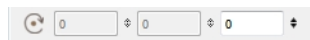
Using this field, you can set the camera rotation value. When working in a 2D project, only the last field is active, letting you rotate the camera only on the Z-axis (right and left). When working in a 3D project, the three fields become active and respectively represent the rotation value of the X, Y, and Z axis. You can also use the Camera tool to rotate the camera frame from the Stage or Camera view—see *Setting the Camera Frame* on page 340 and *Working in a 3D Space* on page 257

Scene Duration

The scene duration displays the selected scene's length in timecode format.

Panel Duration

The Panel duration displays the selected panel's length in timecode format; the default length of a panel is 1 second.

Camera Keyframes

Camera keyframes enable you to modify the position of your camera and have it change over time. The camera keyframes are coordinates indicating the position of your camera on a particular frame. In order to create any camera movements, you must set at least two camera keyframes.

With Camera keyframes, you set the camera to go from one position in the frame to another, over a defined number of frames. You will also be able to control the velocity at which the camera attains its final position.

This section includes the following topics:

Keyframes in the Timeline View

Keyframes appear as grey diamonds (or half diamonds) in the Timeline view. The space between the keyframes in the Timeline view is the number of frames takes the camera to move from one keyframe to the next, determining the speed.

A keyframe that is selected in the Timeline view is displayed in blue. Camera keyframes are displayed in the Timeline view only, in a strip above the panel thumbnails.
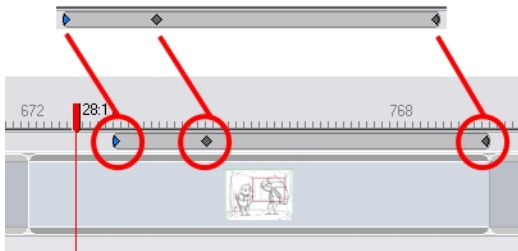
A selected keyframe is in blue; others are displayed in grey.

The first and last keyframes in a scene are displayed as half diamonds, while any in between are displayed as full diamonds.

Keyframes in the Stage View

When you have created a first keyframe in the Stage view, your camera frame will turn green and there will be a green dot on the bottom to indicate the keyframe.
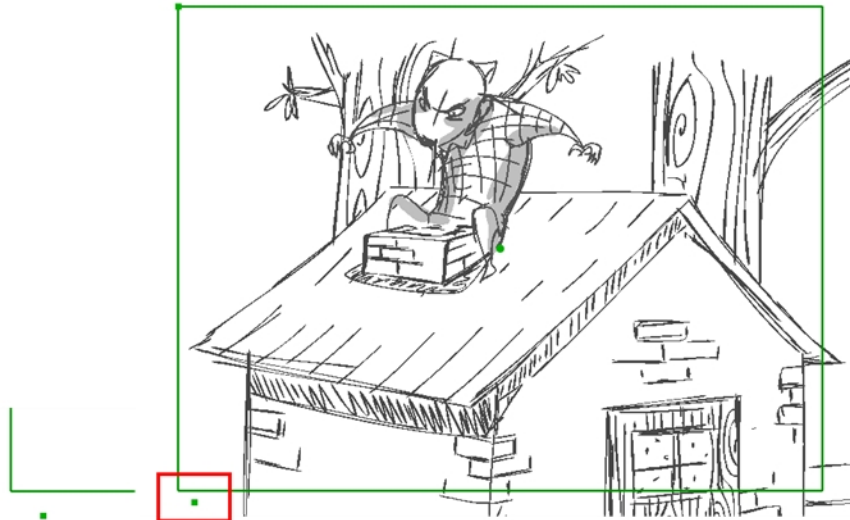
If you have more than one keyframe within a scene, you will see a red dot indicating the last keyframe and more blue dots for the ones in between. Use these dots to select the desired keyframe when moving the frame in the Stage View. If you did not modify the position of the camera frame for those keyframes, the order is ascending from left to right—see *Moving Keyframes in the Stage View* on page 355.

These are the default camera keyframes colours. You can use the Preferences dialog box to choose your own camera keyframe colours. These will be the new colours use in the Camera and Stage views display as well as in the different export formats of your storyboard—see *Colours* on page 408.

Creating Camera Keyframes

In order to create any animated camera for a scene, you will need at least two keyframes. Create these keyframes before you change the position of your camera if you plan to move it. Below are four methods to add keyframes to the Timeline view.

To add a keyframe at the current frame:

1. In the Timeline view, drag the red playhead to the frame on which you want add a keyframe.

2. From the Tools toolbar or the Tools menu, select the Camera tool.

3. Do one of the following:

   ‣ From the top menu, select **Camera > Add Camera Keyframe at Current Frame.**
   ‣ In the Tool Properties view, click the Add Keyframe button.
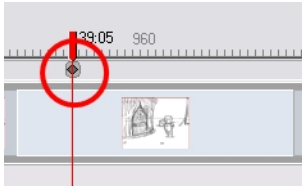
A keyframe is added in the Timeline view at the exact position of the red playhead.

To add a keyframe at the beginning of the current panel:

1. In the Timeline view, select the panel on which you want to add a keyframe.

2. From the Tools toolbar or the Tools menu, select the Camera   tool.

3. Do one of the following:

   ‣ From the top menu, select **Camera > Add Camera Keyframe at Beginning of panel.**
   ‣ In the Tool Properties view, click the Add Keyframe at Beginning of Current Panel   button.
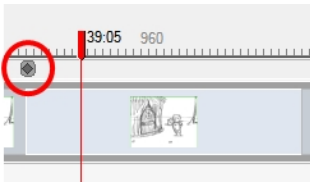
A keyframe is added in the Timeline view at the beginning of the current panel.

To add a keyframe at the end of the current panel:

1. In the Timeline view, select the panel on which you want to add a keyframe.

2. From the Cameratoolbar or the Tools menu, select the Camera 🎥 tool.

3. Do one of the following:

   ‣ From the top menu, select **Camera > Add Camera Keyframe at the End of Panel**.
   ‣ In the Tool Properties view, click the Add Keyframe at the End of Current Panel 🔘 button.
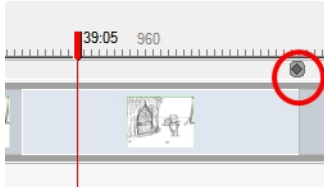
   A keyframe is added in the Timeline view, at the end of the current panel.

To use the Copy and Paste commands to add keyframes:

1. In the Timeline view, click to select a camera keyframe. It will become blue when selected.
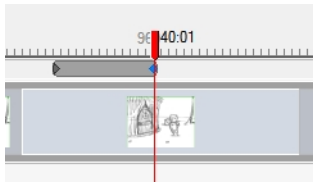
   In the Stage view, click the camera keyframe.

2. From the top menu, select **Edit > Copy Camera Keyframes** or press [Ctrl]+[C] (Windows) or [⌘]+[C] (Mac OS X).

   ‣ Select the Camera 🎥 tool, and in the Tool Properties view or Camera toolbar, click the Copy Camera from Selected Panels 📋 button.

3. Move the red playhead to the position within the same scene where you want to paste the keyframe.
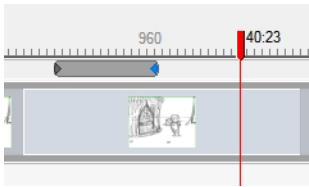
4. From the top menu, select **Edit > Paste Camera Keyframes** or press [Ctrl]+[V] (Windows) or [⌘]+[V] (Mac OS X).
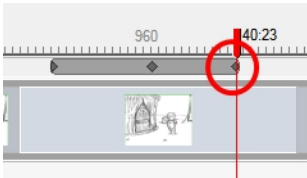
‣ Select the **Camera** ⬚ tool, and in the Tool Properties view or Camera toolbar, click the Paste and Fit Camera on Selected Panels ⬚ button.

NOTE: You can copy/paste several keyframes simultaneously if you have several keyframes selected before performing the operation.

Moving Keyframes in the Stage View

The position of the camera keyframes are set in much the same way as the Static Camera; using the Camera tool in the Stage view. You will do this for every keyframe you have created, so your camera moves from one keyframe to the next when played back.

NOTE: This section shows you how to set up a 2D Camera movement. Once you enable the 3D space mode, new manipulators become available—see *Working in a 3D Space* on page 257 to learn more about 3D camera moves and framing your 3D scene.

NOTE: Enabling the Camera Label in the Stage view can be very helpful when manipulating keyframes. You can do this via the Stage view status bar.
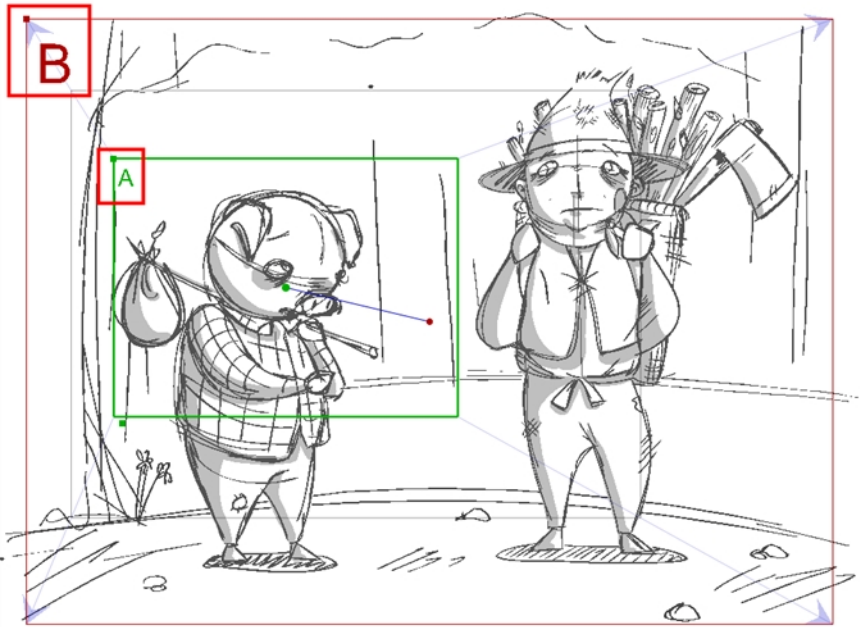
To position camera keyframes in a 2D project:

1. To display the Camera Status toolbar, select **Edit > Preferences** (Windows) or **Storyboard Pro > Preferences** (Mac OS X).

   The Preferences dialog box opens.

2. Select the **Camera** tab.

3. In the Options section, select the **Show Status Bar** option.

4. Click OK.

5. From the Tools toolbar or the Tools menu, select the Camera 🐾 tool.

6. In the Stage view, click to select the camera keyframe you want to modify. If you have more than one keyframe within a scene, you will see more dots here. Use these dots to select the desired keyframe when moving the frame in Stage view. The order is ascending from left to right.
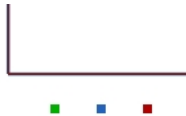
7. Use one of the following methods to modify the camera keyframe:

   ▸ To position the selected keyframe along the Z axis, creating a truck in or truck out movement, drag the top-left corner of the frame when you see the Truck ◈ icon. If you want to modify the Zoom level, use the Field of View field in the Tool Properties view.
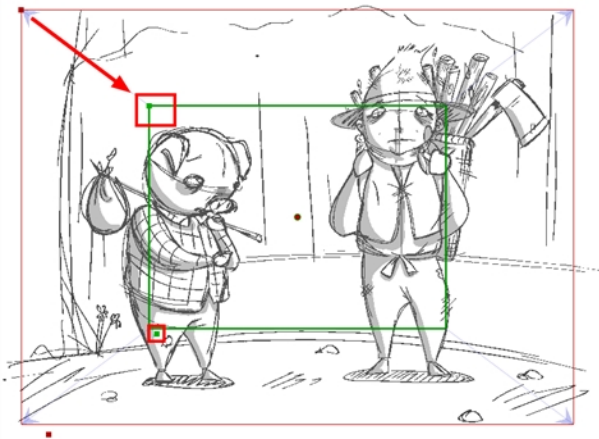
When you release the mouse, the keyframe is set, and blue arrows appear to indicate the direction of the camera movement. In this case, it would be zooming out from position A to position B.

‣ To rotate the selected keyframe, drag the top-left corner of the frame when you see the Rotate ⟳ icon.
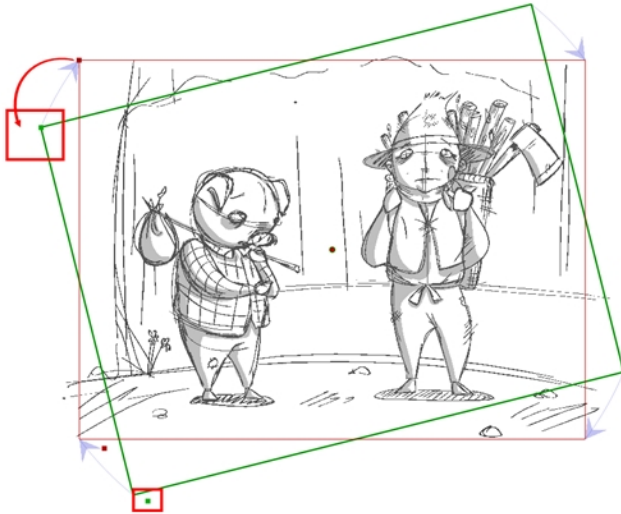
‣ To move the selected keyframe, drag the frame from the centre pivot point or the outer edge of the camera frame when you see the Drag ⊕ icon.
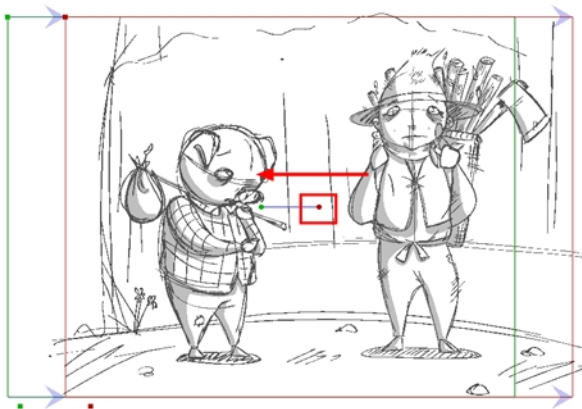
Keyframe B was dragged to the right of keyframe A. When the Camera pans, it will pan from left to right.

‣ You can also nudge the selected keyframe by pressing [Up], [Down], [Left] and [Right] on the keyboard.

At this point, if you wanted to, you could select the B position keyframe and move it to a new location. The scene, when played back, will contain a camera that moves from position A to position B.

Modifying the Trajectory with Control Points

You can change the camera path from one keyframe to the next by adding control points to the trajectory.

To add control points to a trajectory:

1. In the Timeline view, select the scene on which you want to modify the camera trajectory.

2. From the Tools toolbar or the Tools menu, select the Camera 🔧 tool.

3. In the Stage view, place the cursor over the trajectory between two keyframes.
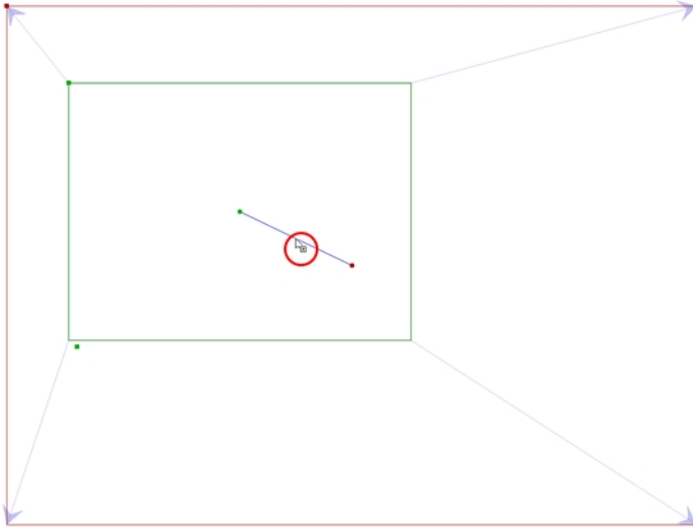
4. When you see this icon ⬚ , click and drag the trajectory to reshape it.

5. A control point is added when you let go of the mouse button.
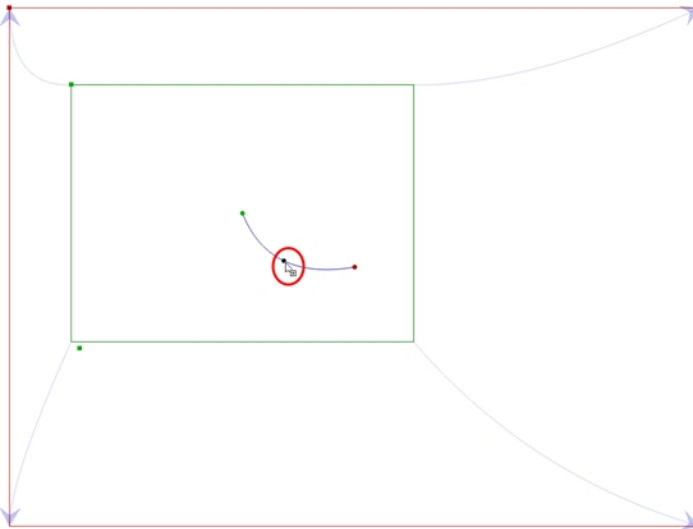
    Now, instead of the camera going from A to B in a linear fashion, there is a slight curve to the trajectory.

6. Click the control point to move it and to reshape the trajectory if desired. You can also select the control point in the Stage view, Top view or Side view and click Delete. You do not have to go to the Timeline.
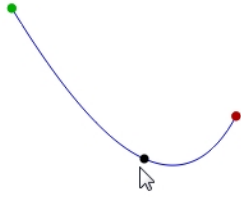
Deleting a Control Point

Control points are visible in the Timeline, but you can only move them in the Stage view. To delete a control point, you must go to the Timeline.

To delete a control point:

1. In the Timeline view, select the control point, represented by a small dot between keyframes.

   The control point turned blue.
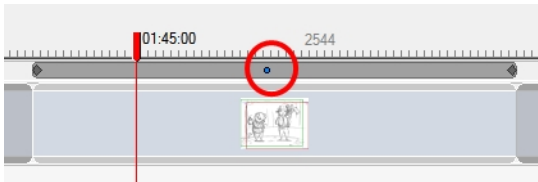
2. Press [Delete] to remove the selected point.

   The trajectory reverts to its original shape after you delete the control point.

Moving Keyframes on the Timeline

If you need to change the position of a keyframe in the Timeline view, there are a couple different ways to do this. Note that camera keyframes can only be moved to a new location within the same scene. The following two methods are useful when you want to move a keyframe to a new location, or cut and paste a keyframe.

- *Adjusting the Continuity, Tension and Bias between Keyframes* on page 362
- *Snapping* on page 365
- *Spreading Camera Motion Across Panels of a Scene* on page 365

To drag camera keyframes to a new location in the Timeline view:

1. In the Timeline view, select a keyframe.

   The keyframe turns blue.

2. Drag the selected keyframe left or right to choose a new position in time. You can only drag it to a new location within your current scene.
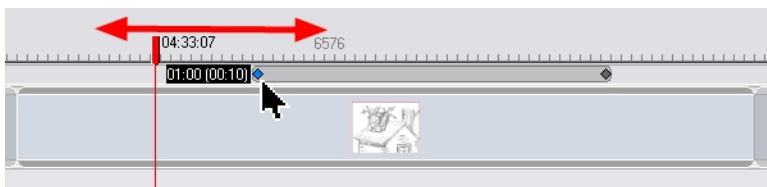
While you drag the keyframe, its position relative to the scene is displayed in a black box. Also displayed is the number of frames from the original position the new keyframe will be located.
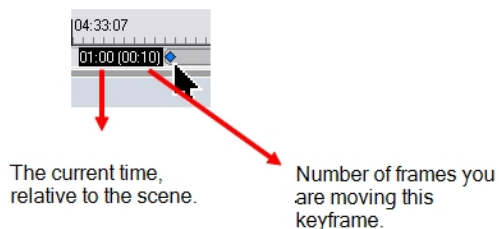
NOTE: You can drag more than one keyframe at a time. Simply select them before dragging.

To using the Cut and Paste commands to move keyframes:

1. In the Timeline view, select a keyframe.

   The keyframe turns blue.
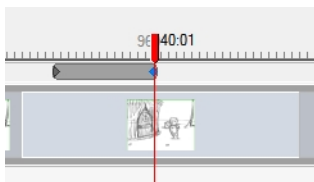
1. From the top menu, select **Edit > Cut Camera Keyframes** or press [Ctrl]+[X] (Windows) or [⌘]+[X] (Mac OS X).

   The keyframe is removed from the Timeline view, and copied to the Clipboard.
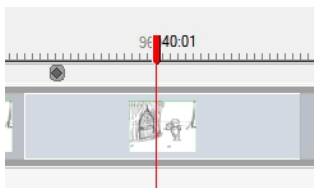
2. Move the red playhead to the position within the same scene on which you want to paste the keyframe.

3. From the top menu, select **Edit > Paste Camera Keyframes** or press [Ctrl]+[V] (Windows) or [⌘]+[V] (Mac OS X).
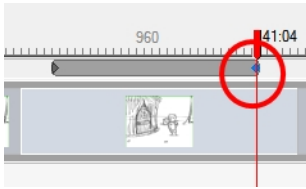
> **NOTE:** This will work to cut/paste several keyframes at one time if you have several keyframes selected before performing the operation.

Adjusting the Continuity, Tension and Bias between Keyframes

You can adjust the Tension, Bias, and Continuity parameters on keyframes and control points by selecting the point in the Timeline view and using the Keyframes and Control Points toolbar.

- **Continuity** controls the smoothness of a transition between the segments joined by a point.
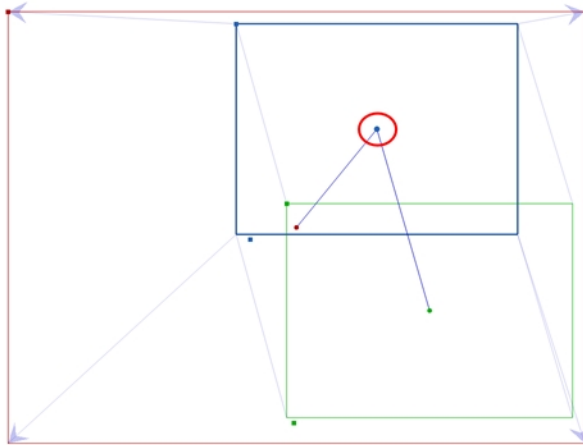
A Continuity of -1 sharpens the transition on either side of the keyframe
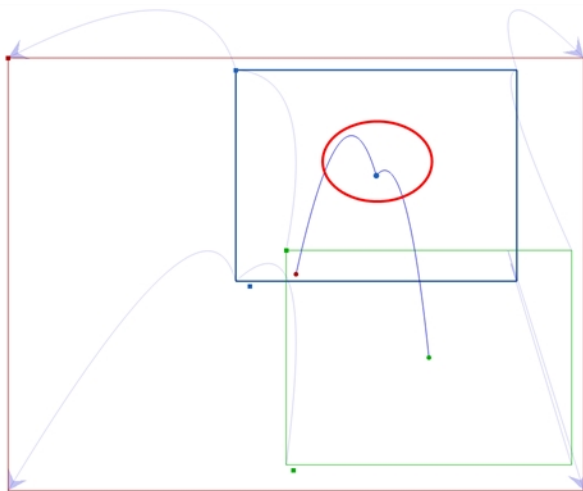
A Continuity of +1 rounds out the transition, creating two gentle curves on either side of the keyframe

- **Tension** controls how sharply the path bends as it passes through a control point or keyframe.
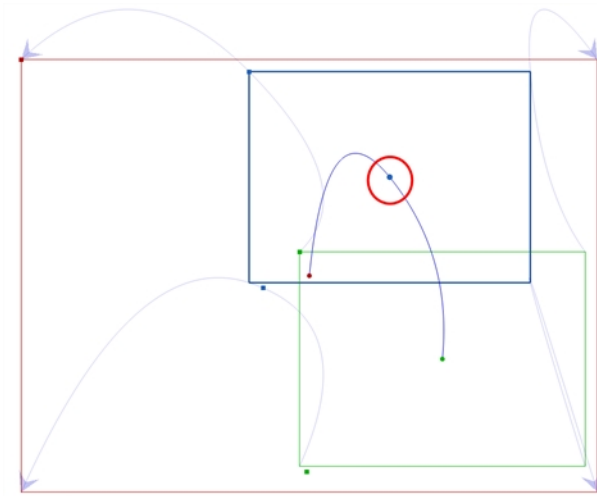
A Tension of -1 increases the curve on either side of the keyframe
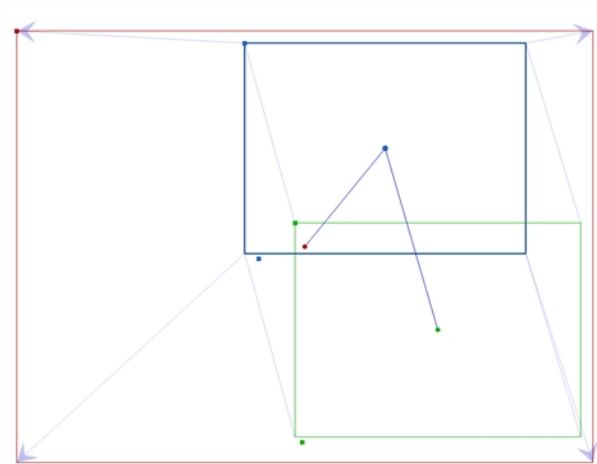
A Tension of +1 sharpens the curve on either side of the keyframe

- **Bias** controls the slope of the path so that it flows towards one side of the motion point or the other.
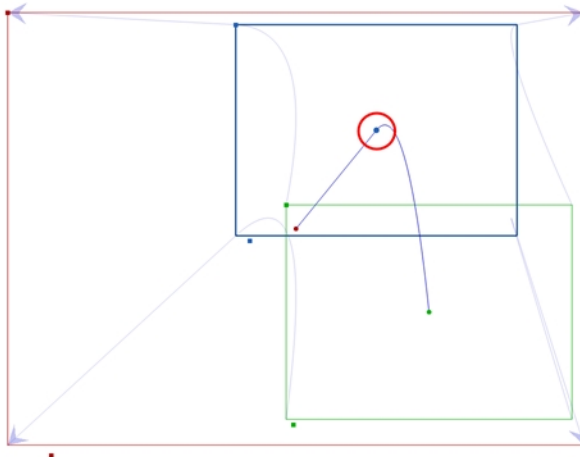
A Bias of -1 favours the left side of the keyframe
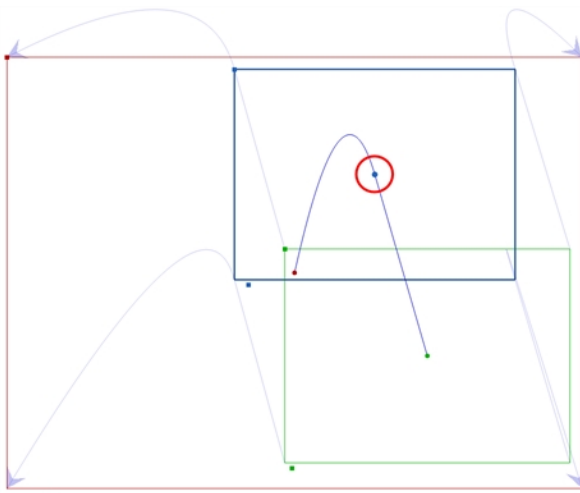
A Bias of +1 favours the right side of the keyframe

To adjust the Continuity, Tension and Bias parameters:

1. In the Tools toolbar, select the Camera 🎥 tool.

2. In the Timeline view, select the keyframe or control point you want to adjust.

3. In the Keyframes and Control Points toolbar, adjust the Continuity, Tension, and Bias parameters.

   | T 0 | ♦ C 0 | ♦ B 0 | ♦ |

   If the Keyframes and Control Points toolbar is not visible, from the top menu, select **Windows > Toolbars > Keyframes and Control Points**.

If you find that you are using the same Continuity, Tension and Bias settings, you can set a preference to remember your settings.

To adjust the Keyframes and Control Points default preferences:

1. From the top menu, select **Edit > Preferences** (Windows) or**Storyboard Pro> Preferences** (Mac OS X).

   The Preferences dialog box opens.

2. Select the **Camera** tab.

3. In the Keyframes and Controls Points section, type in the defaults for Tension, Continuity and Bias, based on your preferred settings.

Snapping

If you turn on snapping, camera keyframes, panels and sound tracks snap to the beginning and end of each panel, each sound track, or the red playhead when dragging.

To turn snapping on/off, do one of the following:

- ▸ At the bottom of the Timeline view, click the Snapping ✛ button.

- ▸ Right-click the Timeline view and select **Snapping**.

NOTE: Snapping settings can be overridden by holding the [Shift] key.

Spreading Camera Motion Across Panels of a Scene

A camera movement is not restricted to a panel. Keyframes for a particular camera movement can span multiple panels within the same scene.

To modifying a camera movement to span across panels of a scene:

1. In the Timeline view, select the panel that contains the camera movement you want to span over multiple panels.
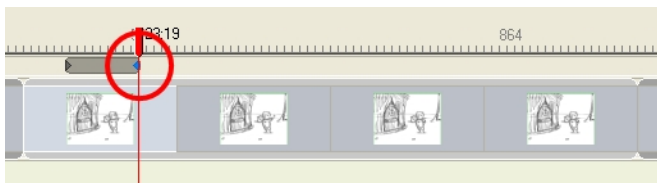
2. Select the keyframe you want to move to a new panel.

3. Drag the selected keyframe to another panel within the scene.

Keyframe Syncing

When you change the duration of your panels, add, delete or drag-and-drop scenes and panels, it affects the placement of keyframes. There are three keyframe syncing options that affect keyframes when changing the duration of panels. Depending on what option you have set, your keyframes will be repositioned accordingly. The following examples demonstrate resizing panels by dragging, but the options will affect your keyframes in the same way, regardless of the method you use to change the duration of your panel.

The three options for keyframe synching are:

Setting Keyframe Synching Options

To change keyframe synching settings:

▸ In the Timeline view, right-click the area with the camera keyframes and select **Keyframes Sync Mode > None**, **Relative to Panel** or **Relative to Scene**.

Setting Keyframe Synching to None

Setting your keyframe synching to None makes your keyframes remain exactly where they are when you change the panel duration. You will lose keyframes that are not within the range of the scene.

The panel at its original length.
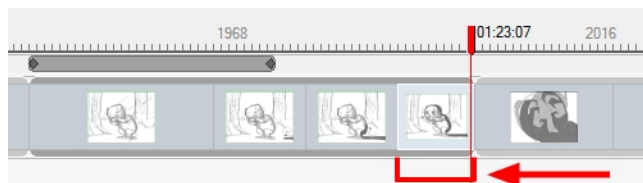
The panel, after it has been shortened. The keyframe that was in the scene, but no longer is, is deleted. All other keyframes in the scene are unaffected.

The panel, after it was lengthened. All other keyframes in the scene remain unaffected.

Setting Keyframe Synching to Relative to Panels

When you have the Relative to Panels option selected, all the keyframes within the selected panel will be repositioned, relative to where they were placed in the panel. When a panel is deleted, all keyframes within the deleted panel will also be deleted.
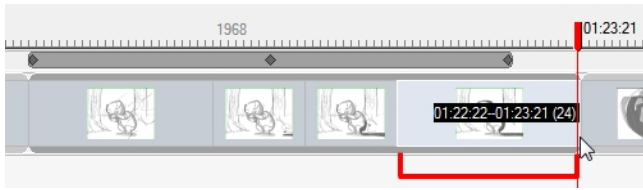
The panel at its original length.

The panel, after it has been shortened. The keyframe within this panel is repositioned relative to where it was in the panel. All keyframes outside the current panel are unaffected.
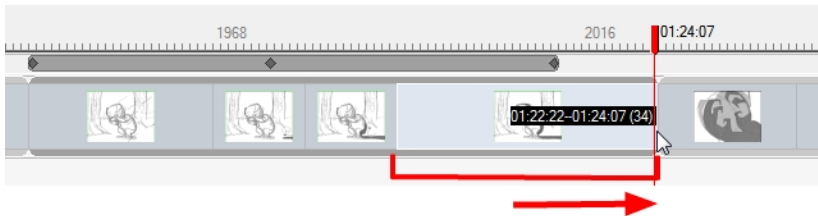
The panel, after it has been lengthened. The keyframe within this panel is repositioned relative to where it was in the panel. All keyframes outside the current panel are unaffected.

Setting Keyframe Synching to Relative to Scene

When you have the Relative to Scene option selected, all the keyframes within the selected scene will be repositioned, relative to where they were placed.

The panel at its original length.

The shot, after it has been shortened. All keyframes within this scene are repositioned relative to where they are in the shot.

The shot after it has been lengthened. All keyframes within this shot are repositioned relative to where it was in the shot.

Easing In or Out

For effect, you can adjust your camera movements so they ease in or ease out of the keyframes.

With the Camera ⬛ tool selected, the Ease In/ Ease Out parameters become available in the Tool Properties view.
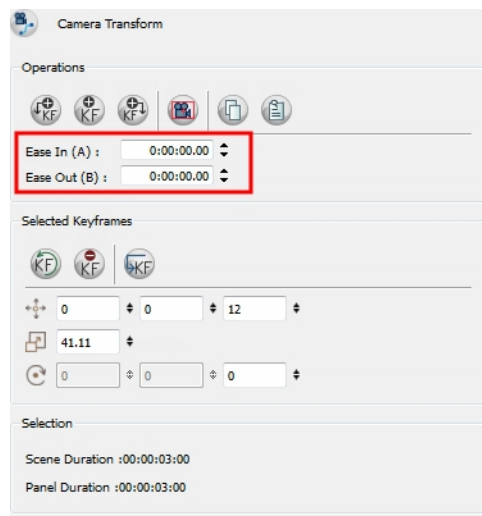
To set ease in or ease out for a keyframe:

1. In the Timeline view, select a keyframe.

2. From the Tools toolbar or the Tools menu, select the Camera 🐛 tool.

3. Do one of the following:

   ▸ **Ease In**: In the Ease In section of the Tool Properties view, enter the duration of the ease in after the first frame in which the gradual change in camera or layer movement begins. For example, if you want to slowly accelerate to the normal camera or layer speed from frame 1-10, enter a value of 10.

   ▸ **Ease Out**: In the Ease Out section of the Tool Properties view, enter the duration of the ease out after the first frame in which the gradual change in camera or layer movement begins. Enter the number of frames before the last frame in which the change in camera or layer movement is gradual.

Deleting Keyframes

To delete keyframes from the Timeline view:

1. Select the keyframe(s) you want to delete.

2. Do one of the following:

   ▸ From the top menu, select **Edit > Delete Selected Camera Keyframes.**

   ▸ Select the Camera 🐛 tool, and in the Tool Properties view, click the Delete Selected Keyframe 🔑 button.

   ▸ Press [Delete].

To delete the keyframe at the current frame:

1. Place the red playhead at the frame on which you want to delete a keyframe.

2. From the top menu, select **Camera > Remove Camera Keyframe at Current Frame.**

Resetting the Camera Animation

If necessary, you can remove all the keyframes in your scene, and revert back to the original Static Camera.

To reset camera animation:

1. In the Timeline view, select the scene on which you want to reset the camera animation.

2. Do one of the following:

   ‣ Select the Camera 🔧 tool, and in the Tool Properties view, click the Reset Camera 🖼 button.

   ‣ From the top menu, select **Camera > Reset Camera**.

   All camera keyframes for the selected scene are deleted and the scene's Static Camera is reset.

Camera by Panel Compatibility Mode Preferences

If you were working with a copy of Storyboard Pro v1.6 and you upgraded to the current version, it is possible that you may want to keep working with the camera keyframes settings as you did before you upgraded. You can do this by enabling the Camera by Panel Compatibility Mode option.

This section includes the following topics:

- *Enabling the Camera by Panel Compatibility Mode Option* on page 370
- *Allow Advanced Camera Operations Option* on page 371

Enabling the Camera by Panel Compatibility Mode Option

To Enable the Camera by Panel Compatibility Mode option:

1. Open the Preferences dialog box:

   ‣ Select **Edit > Preferences** (Windows) or **Storyboard Pro > Preferences** (Mac OS X).

   ‣ Press [Ctrl]+[U] (Windows) or [⌘]+[U] (Mac OS X).

2. In the Preferences dialog box, select the **Camera** tab.

3. In the Keyframes and Control Points section, select the **Camera by Panel Compatibility Mode** option.
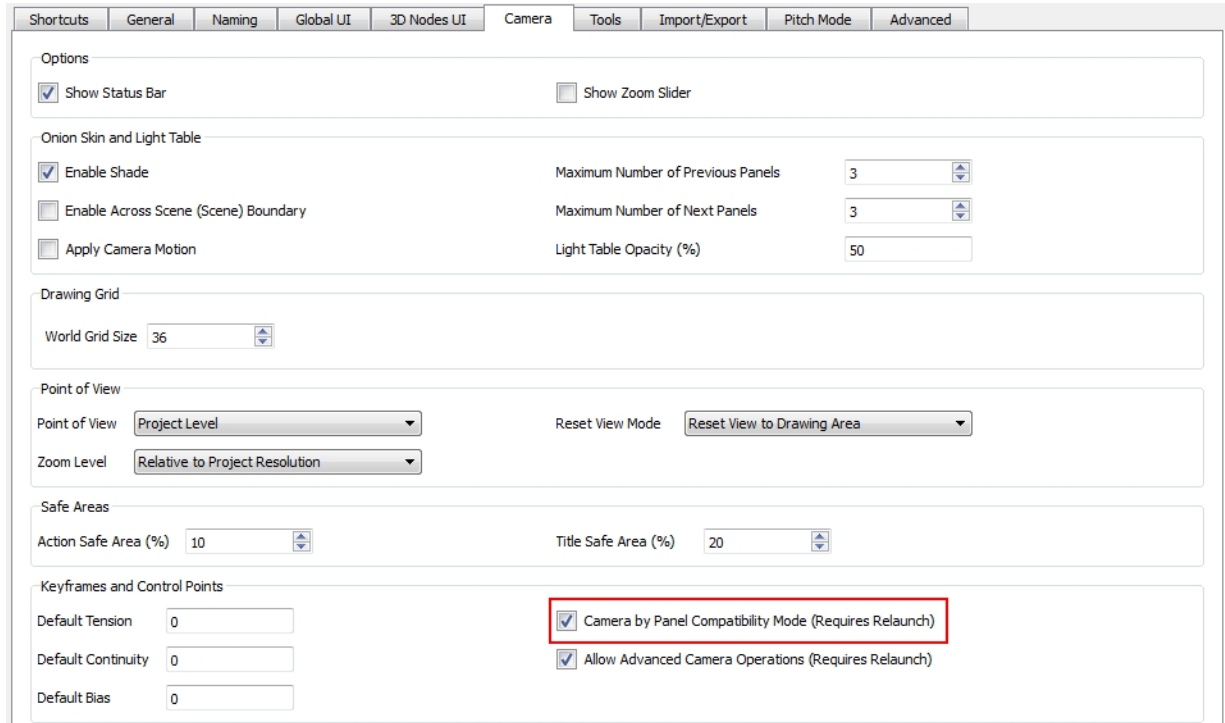
NOTE: This feature requires you to relaunch the software.

Once the software is relaunched, you will notice some important changes with how the camera keyframes and panels are handled:

- When a new panel is created, camera keyframes are added at the beginning and end of the panel automatically.

- When creating a new panel, the camera frame will be placed to match the camera of the previous panel.

- The reset camera button changes behavior. Instead of deleting all camera keyframes from the selected scene, it will reset the start and end camera of the selected panel.

- The Static Camera ⬚ tool becomes available in the Tools toolbar on the main screen. Use this button to match all camera frames in the panel to the selected frame.

Also, alternative commands become available in the Camera menu:

- Paste and Repeat Camera on Selected Panels: Pastes the copied keyframes and fits them into the selected panel. If multiple panels are selected, the keyframes repeated in each of them.

- Paste and Spread Camera on Selected Panels: Pastes the copied keyframes and spread them across all the panels of the selected scene.

- Reset Camera on Selected Panels: Resets the start and end camera of the selected panels.

Allow Advanced Camera Operations Option

This preference is enabled by default and it is not possible to deactivate it unless you enable the **Camera by Panel Compatibility Mode** option first. Disabling the **Allow Advanced Camera Operations** preference will hide some of the options that are normally available in the Camera Tool Properties view.

To disable the Allow Advanced Camera Operations option:

1. Open the Preferences dialog box:

   ‣ Select **Edit > Preferences** (Windows) or **Storyboard Pro > Preferences** (Mac OS X).

   ‣ Press [Ctrl] + [U] (Windows) or [⌘] + [U] (Mac OS X).

2. In the Preferences dialog box, select the **Camera** tab.

3. In the Keyframes and Control Points section, select the **Camera by Panel Compatibility Mode** preference.

4. Deselect the **Allow Advanced Camera Operation** option.

Keyframes and Control Points	
Default Tension 0	☑ Camera by Panel Compatibility Mode (Requires Relaunch)
Default Continuity 0	☐ Allow Advanced Camera Operations (Requires Relaunch)
Default Bias 0	
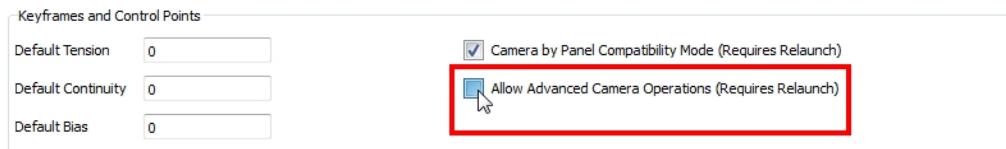
NOTE: This feature requires you to relaunch the software.

Once the software is relaunched, notice that some buttons are hidden from the Camera's Tool properties view:
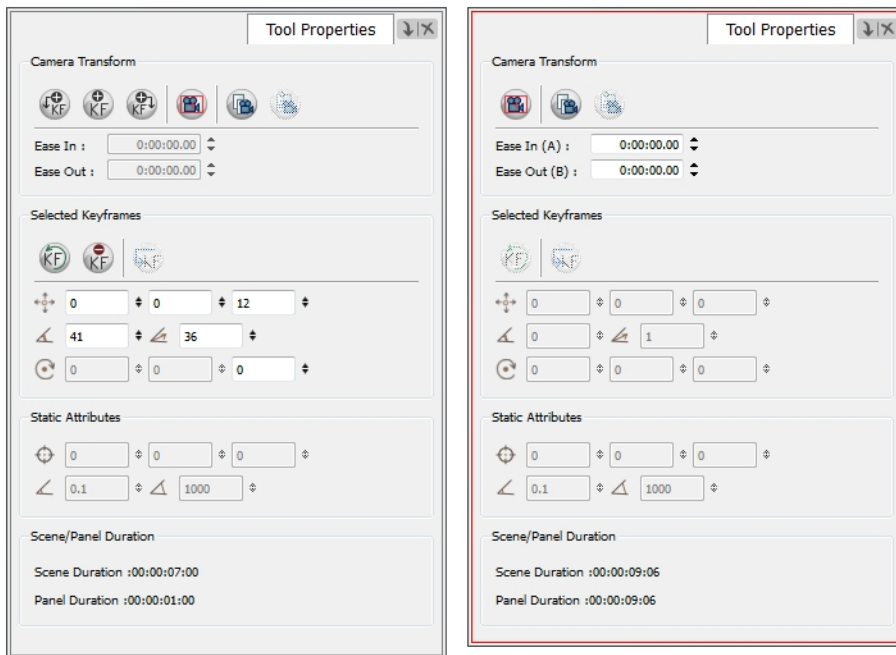
Default Camera Tool Properties view

Camera Tool Properties view with
Allow Advanced Camera Operations disabled

Previewing the Panel with the Camera View

You can use the Stage view or the Camera view to place your camera. However, if you attempt to preview the effect of the camera movement using the Stage View, the visual effect may not be accurately portrayed, especially if you change the camera's depth position along the Z-axis or rotate it in the 3D space—see *Working in a 3D Space* on page 257.

In the Stage view, the perspective is from a fixed point in space, which is where the camera is placed by default. As you add your keyframes and change the focus and rotation of the camera, you can see how the camera changes over time. But if you preview the scene, the perspective is from that fixed point in the scene, which does not necessarily reflect what the camera sees.

If you switch to Camera view and preview the scene, the perspective is from the camera, so you can see exactly what the camera captures as it moves from one keyframe to another.
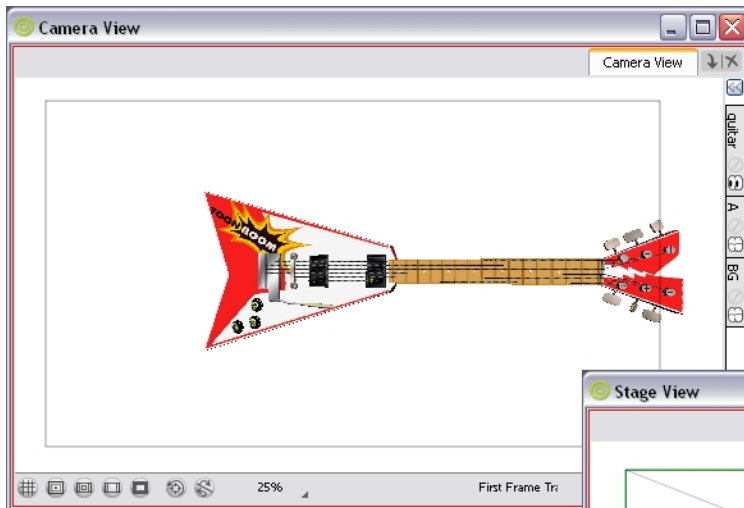
The Camera view window displays the current frame from the point of view of the camera.

Because the camera at the first keyframe is facing the guitar, you see the front face of the guitar.

Because the perspective in the Stage view is locked at the default position, it displays the objects from that perspective.

The guitar in this example is in the same position as above, but from the Stage view perspective, its angle is different.
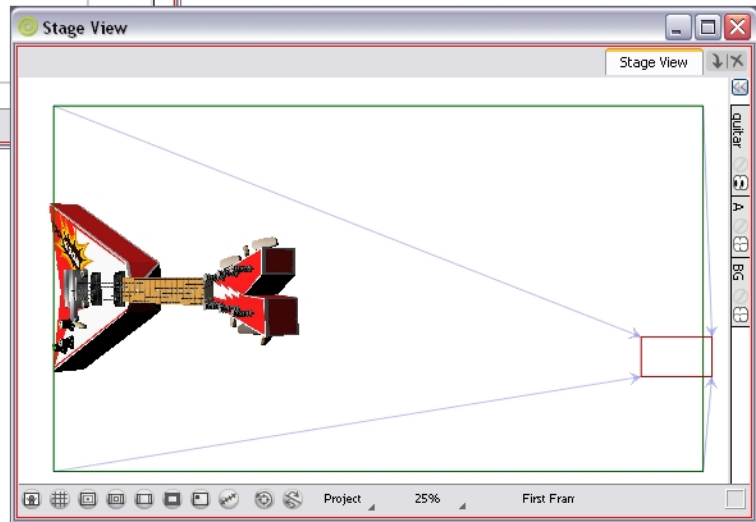
Therefore, if you make changes to the camera position, especially if you change the camera's focus, use the Camera view to preview the camera move accurately.

To display the Camera view:

▸ Select **Windows > Camera View** or right-click the tab area and select **Camera View**.

Animating Layers

Like the camera, individual layers can be animated in your panels. This is helpful to test the potential animation of scene elements. In Storyboard Pro, you can set the position of a layer at the beginning of a panel and set a different position for the end. As the panels play back, the layer moves from position A to position B.

To animate a layer, you will use the First and Last Frame Transform tools.

This section includes the following topics:

- *Setting the Pivot for a Layer* on page 373
- *First Frame Transform and Last Frame Transform Tools* on page 375
- *Setting First and Last Frame Positions* on page 379
- *Adjust First and Last Frame Transformation Positions* on page 383

Setting the Pivot for a Layer

If you plan to animate a layer, it is wise to first set that layer's pivot point. If you do not intend to animate a layer, there is no need to set the pivot.

To set the pivot for a layer:

1. In the Timeline view, select the panel on which you want to animate a layer.

2. From the Tools toolbar or the Tools menu, select the First Frame Transform ⌁ tool.

3. In the Stage view, select the layer you want to animate.

    The currently selected layer's transformation controls and pivot point become visible. The pivot point is a blue circle situated at the centre of the camera frame.
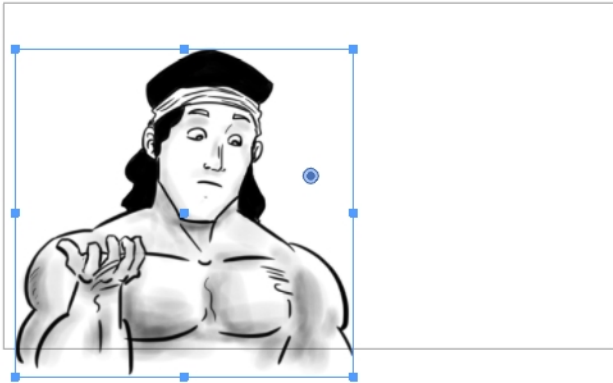
4. In the Stage view, click and drag the pivot point to the desired position.
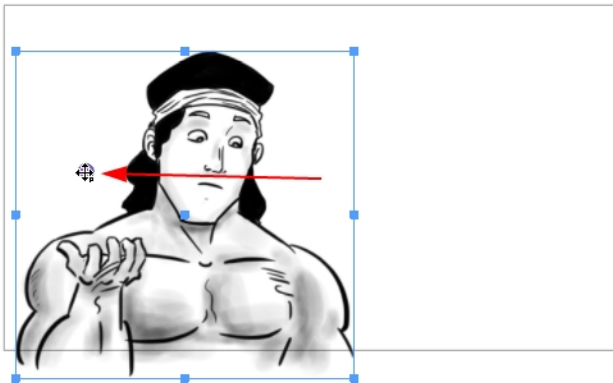
    Now both Layer Transform ⌁ ⌁ tools will use this point as reference when applying transformations.

To set the pivot point at the centre of a selection:

1. In the Timeline view, select the panel containing the layer on which you want to set the pivot.

2. From the Tools toolbar or the Tools menu, select the First Frame Transform ⌁ tool.

3. In the Stage view, select the layer which pivot you want to set at the centre.

4. In the First Frame Transform Tool Properties view, click on the Center Pivot on Selection ⊞ button, or select **Layer > Pivot > Center Pivot on Selection**.

    The pivot position will be set to the centre of the selection.
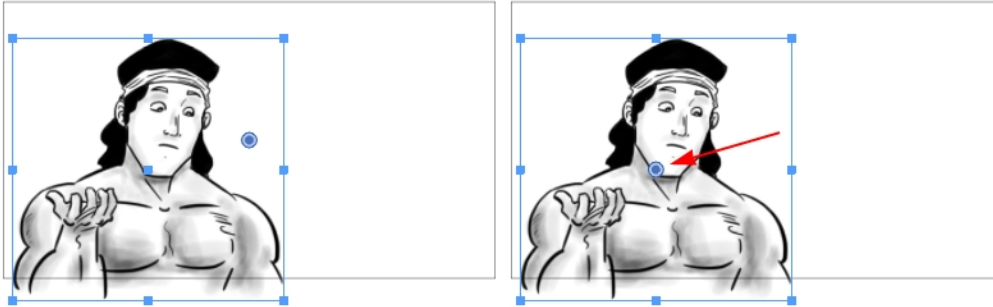
To reset the pivot position:

1. In the Timeline view, select the panel containing the layer on which you want to reset the pivot.

2. From the Tools toolbar or the Tools menu, select the First Frame Transform ⌇ tool.

3. In the Stage view, select the layer which pivot you want to reset.

4. In the First Frame Transform Tool Properties view, click on the Reset Pivot ⊕ button, or select **Layer > Pivot > Reset Pivot**.

    The pivot position will be reset to the centre of the camera frame.

First Frame Transform and Last Frame Transform Tools

The First Frame Transform ⌇ and Last Frame Transform ⌇ tools are two separate tools that will set either the first or last position for a layer when you want it to move over the length of your panel. You can find them in the Tools toolbar or in the top menu under **Tools > First Frame Transform** or **Last Frame Transform**.

With the First Frame Transform and Last Frame Transform tools selected, their operations are displayed in the Tool Properties view. Both tools have the same operations.
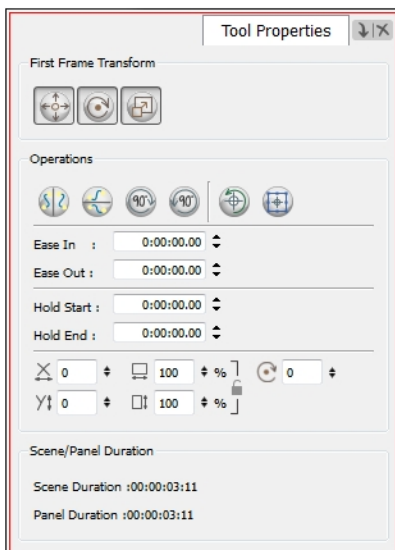
- *Show Translate Controls* on page 377
- *Show Rotate Controls* on page 377
- *Show Scale Controls* on page 377

- *Flip Horizontal and Flip Vertical* on page 377

- *Rotate 90 degrees CW and Rotate 90 degrees CCW* on page 377

- *Reset Pivot* on page 377

- Center Pivot on Selection

- *Ease In and Ease Out* on page 378

- *Hold Start and Hold End* on page 378

- *X and Y Position Offset Field* on page 378

- *Scale* on page 378

- *Angle of Rotation* on page 378

Show Translate Controls

Use this button to show or hide the translation controls in the Stage view when using the First Frame Transform or Last Frame Transform tool on a layer. The controls are displayed by default.

Show Rotate Controls

Use this button to show or hide the rotation controls in the Stage view when using the First Frame Transform or Last Frame Transform tool on a layer. The controls are displayed by default.

Show Scale Controls

Use this button to show or hide the scaling controls in the Stage view when using the First Frame Transform or Last Frame Transform tool on a layer. The controls are displayed by default.

Flip Horizontal and Flip Vertical

Use these buttons to flip your layer horizontally or vertically.

Rotate 90 degrees CW and Rotate 90 degrees CCW

Use these buttons to rotate your layer in 90 degree increments either clockwise or counter clockwise.

Reset Pivot

The Reset Pivot button resets your current layer's pivot point to its original position at the centre of the camera frame. This command is also available from the top menu: **Layer > Pivot > Reset Pivot**.

Center Pivot on Selection

By default, the pivot is positioned at the center of the camera frame. Use this button to set the pivot at the centre of the selected layer. This command is also available from the top menu: **Layer > Pivot > Center Pivot on Selection**.
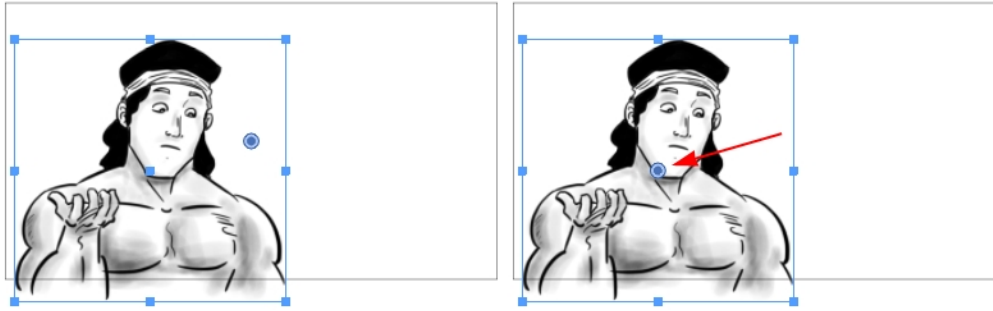
Ease In and Ease Out

Modifying these numbers will change the velocity of the layer movement.

Hold Start and Hold End

Modifying these numbers will change how long the layer will be held without moving at the beginning and end of the panel–see *Hold* on page 384.

X and Y Position Offset Field

These fields are used to manually position the layer along the X and Y axies. Note that these fields are only available while working in 2D mode.

Scale

These fields are used to manually scale the layer vertically and horizontally. You can click on the lock icon to constrain proportions. Note that these fields are only available while working in 2D mode.

Angle of Rotation

This field is used to manually set the rotation angle of the layer. Note that this field is only available while working in 2D mode.

Setting First and Last Frame Positions

Animating a layer is very simple when you use the First Frame Transform and Last Frame Transform tools.

To set the first position for a layer's animation:

1. In the Timeline view, select the panel with the layer you want to animate.

2. In the Stage view, select a layer to animate.
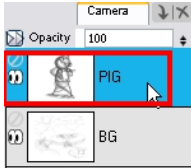
3. From the Tools toolbar or the Tools menu, select the First Frame Transform tool.

   In the Stage view, the layer is highlighted in blue.
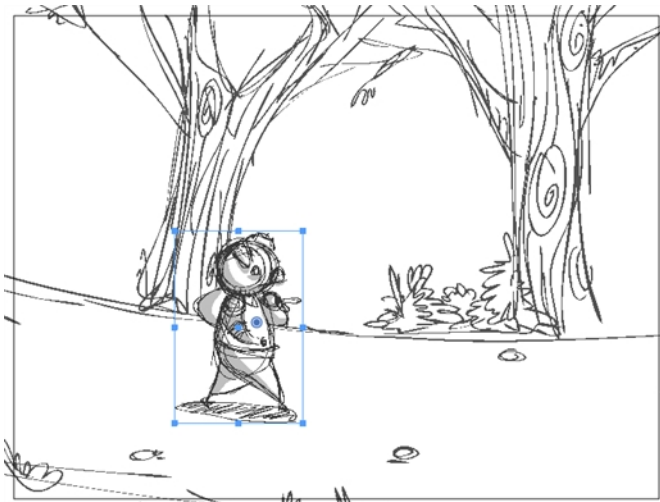
   In the Timeline view, the current frame becomes the first frame of the current panel.
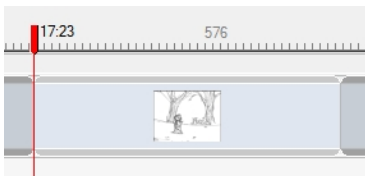
4. Using the transformation handles, scale, rotate and move your layer.
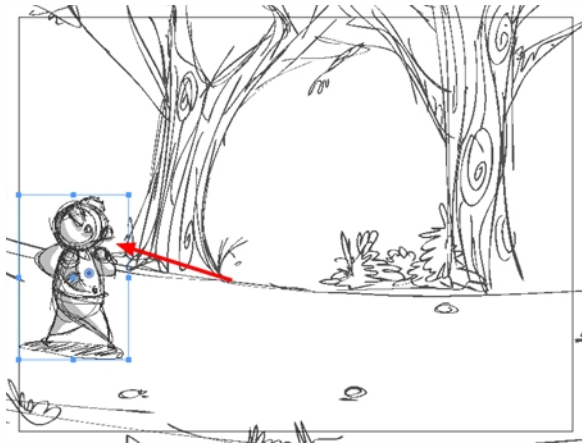
NOTE:
If 3D is enabled, 3D manipulators are displayed, letting you rotate and position the 2D layer within the 3D space–
see *Working in a 3D Space* on page 257*Working in a 3D Space* on page 257.
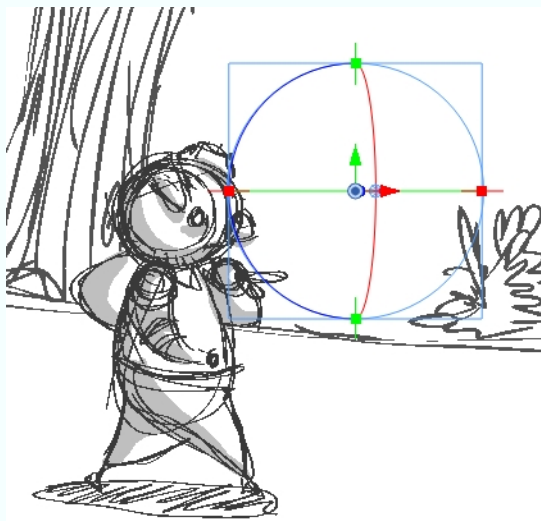
To set the last position for a layer's animation:

1. In the Timeline view, select the panel which contains the layer you want to animate.

2. In the Stage view, select a layer to animate.
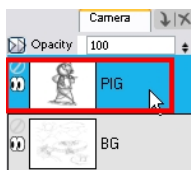
3. From the Tools toolbar or the Tools menu, select the Last Frame Transform ⌐ tool.

    In the Stage view, the layer is highlighted in blue.
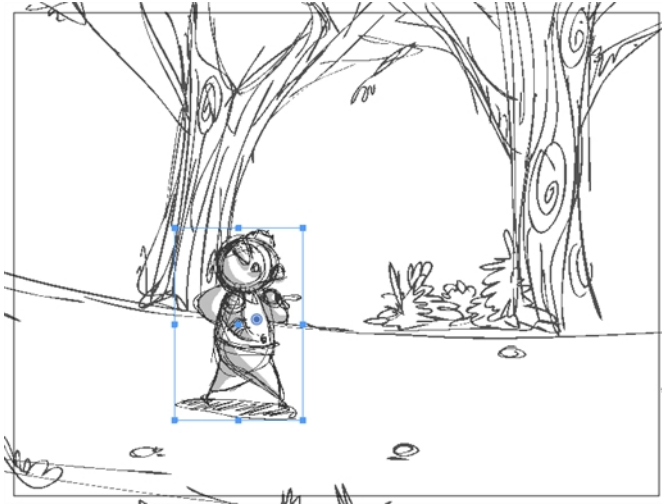
In the Timeline view, the current frame is now the last frame of the current panel.
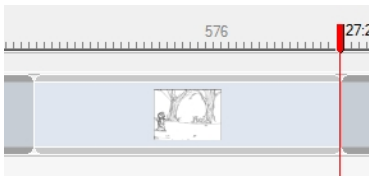
4. Using the transformation handles, you can scale, rotate and move the layer.
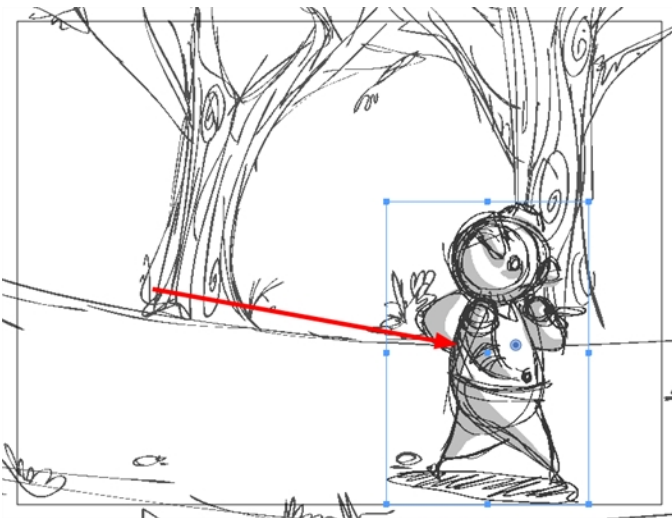
When you play back, the panel shows the layer on which you set first and last frame transformations.

Coordinate Toolbar

You can also use the Coordinate Toolbar, which displays the current translation, scale and rotation values of a selected layer, as well as allowing you to type specific values for each of these parameters. This toolbar is available from the top menu by selecting: **Windows > Toolbars > Coordinate**.

Translation
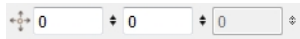
The translation field displays the X, Y and Z translation values of the selected layer. You can use these fields to type in precise values to set the first frame and last frame position of a layer. By default the Z value field is disabled, it will automatically become active when the 3D option is enabled.

Scale
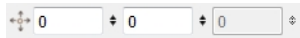
The scale field displays the X, Y and Z scaling values of the selected layer. You can use these fields to type in precise values to set the first frame and last frame size of a layer. By default the Z value field is disabled, it will automatically become active when the 3D option is enabled.

Rotation
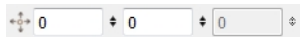
The rotation field displays the X, Y and Z rotation values of the selected layer. You can use these fields to type in precise values to set the first frame and last frame rotation of a layer. By default the X and Y value fields are disabled, it will automatically become active when the 3D option is enabled.

Adjust First and Last Frame Transformation Positions

Once you set your first and last layer transformation positions, there are several ways to adjust them.

- *Ease In and Ease Out* on page 383

- *Hold* on page 384

- *Copy Start Position to End Position* on page 384

- *Copy End Position to Start Position* on page 384

- *Spread Layer Motion* on page 384

- *Reset Transformation* on page 385

Ease In and Ease Out

The Easing function allow you to set the ease in and ease out cushioning for your layer transformations. This will help adjust the timing of the layer movement.

To set ease in/out for a layer transformation:

1. In the Timeline view, click to select the panel that contains layer transformation.

2. In the Stage view, select the layer on which you want to modify the ease in and ease out.
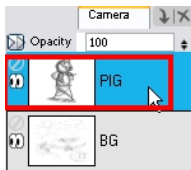
3. From the Tools toolbar or the Tools menu, select a Layer Transform tools

4. In the Ease In or Ease Out section of the Tool Properties view, enter the duration of the ease in after the first frame in which the gradual change in layer movement begins. For example, if you want to slowly accelerate to the normal layer speed from frame 1-10, enter a value of 10.
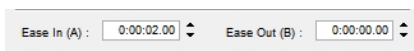
Hold

The Hold function lets you delay layer transformations at the beginning or end of a panel. This helps you adjust the timing of the layer movement.

To create a hold:

1. In the Timeline view, select the panel that contains layer transformation.

2. In the Stage view, select the layer on which you want to modify the hold.
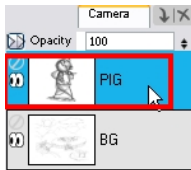
3. From the Tools toolbar or the Tools menu, select a Layer Transform tools.

4. **Hold at beginning**: In the Hold Start section of the Tool Properties view, enter the number of frames the layer should hold before it starts to move.

5. **Hold at end**: In the Hold End section of the Tool Properties view, enter the number of frames the layer should hold before the layer transformation ends.
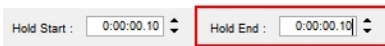
Copy Start Position to End Position

Uses the position of the first frame from the current layer and paste it over the last frame.

To copy the end position from the start position:

1. In the Timeline view, select the panel that contains the start position you want to copy.

2. From the top menu, select **Layer > Copy Start Layer Position to End**.

Copy End Position to Start Position

Uses the position of the last frame from the current layer and pastes it over the position of the first frame.

To copy the start position from the end position:

1. In the Timeline view, select the panel that contains the end position you want to copy.

2. Select **Layer > Copy End Layer Position to Start**.

Spread Layer Motion

You can spread the current layer motion across all panels in the same shot or a specified number of adjacent panels after the current panel in the same shot.

A new layer will be added and the drawing will be duplicated for those panels that do not have the same name in the defined range.

To spread the motion from one panel to more than one panel:

1. In the Timeline view, select the layer with the motion you want to spread.

2. Do one of the following:

   ‣ Select **Layer > Spread Layer Motion**.
   ‣ In the Layer Toolbar's extra buttons, click the Spread Layer Motion 🔳 button.
     The Spread Layer Motion dialog box opens.

   > You can only spread motion into the panels in the same scene.
   >
   > New layer will be added and drawing will be duplicated for those panels that don't have the same name layer.
   >
   > Choose target:
   > ◉ All panels in the same scene
   > ○ Next [3] panel(s)
   >
   > [OK]   [Cancel]
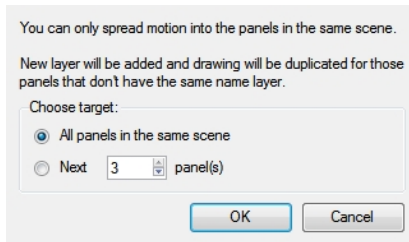
3. Do one of the following:

   ‣ To spread layer motion over all panels in the same shot, select All panels in the same shot.
   ‣ To spread layer motion a specified number of adjacent panels after the current panel in the same shot, select Next panel(s) and enter or select the number of adjacent panels.

Reset Transformation

To reset your layer animation back to its default state:

1. In the Timeline view, select a layer.

2. Select **Layer > Reset Transform** or press [Ctrl]+[R] (Windows) or [⌘]+[R] (Mac OS X).

Sound

When you decide that you want to add sound to your storyboard, you must first prepare the sound outside of Storyboard Pro.

To work with sounds in Storyboard Pro, add one or more audio tracks into which you import the sound sequences. You can then organize the sounds by organizing audio tracks, mixing sound levels, and editing the part of the sound sequence you will use.

You can preview your panels with sound at any time by playing back an animatic of the current panel or the entire storyboard using the controls in the Play toolbar.

To import sounds and view audio tracks, display the Timeline workspace.

This section includes the following topics:

- *Sound Scrubbing* on page 398

- Adjusting the Sound Length and Timing

Managing Audio Tracks

You can create an audio track in which you can import one or more sounds. You can add an unlimited number of tracks to your project to help you organize your work. For instance, you can have a track for all dialogue or a separate track for each character's dialogue. You can create a track for ambient sound, music, or significant sound effects.

This section includes the following topics:

- *Adding an Audio Track* on page 386

- *Muting an Audio Track* on page 386

- *Muting All Other Audio Tracks* on page 387

- *Locking an Audio Track* on page 387

- *Locking All Other Audio Tracks* on page 389

- *Deleting an AudioTrack* on page 390

- *Selecting All Sound Clips Forward* on page 390

- Marking Sound Clips with Custom Colours

Adding an Audio Track

You can add new audio tracks to your project. To do so, you must work in the Timeline view—see *Import Sound* on page 412.

To add an audio track:

1. Display the Timeline view.

2. Do one of the following:

   ‣ Select **Sound > New AudioTrack**.

   ‣ In the Timeline view, right-click the area below the thumbnails and select **New AudioTrack**.

   ‣ In the Sound toolbar, click the New Audio Track button.
     Once you add a new audio track, you are ready to import a sound.
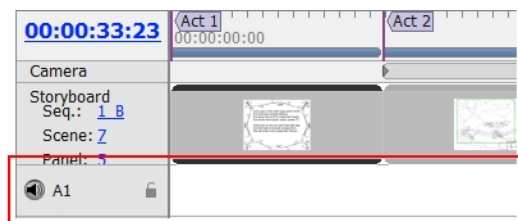
Muting an Audio Track

You can mute all or some of the audio tracks in your project.

To turn the sound on or off for all audio tracks:

‣ In the Playback toolbar, click the Sound 🔊 button to enable audio playback.

To turn on the sound of selected audio tracks:

1. In the selected audio track, click the **Sound On/Off** button to turn that track's sound on or off.

Audio track on   Audio track off
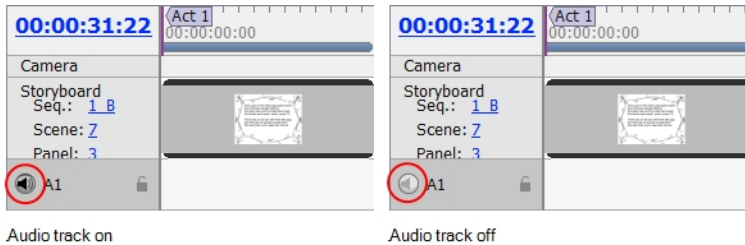
Muting All Other Audio Tracks

When all audio tracks are enabled, you can quickly isolate one audio track by muting all the others at once.

To mute all other audio tracks:

‣ When all audio tracks are enabled. Click the Sound button on the one audio track you want to leave on while holding down the [Alt] key. All other audio tracks will be muted. Click again while holding the [Alt] key to turn them all back on.
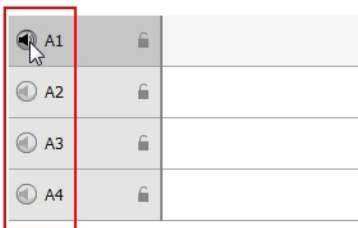
Locking an Audio Track

By default, an audio track follows the timing changes made to your project. This means that if you extend the duration of a panel, the audio track following this panel will move in consequently. However, you can lock an audio track to prevent it from following the timing change. Locking a track will also prevent you from making unwanted changes to the audio timing. Once it is locked, it is impossible to drag and modify the audio clips or import more sound into this track.

To lock an audio track:

‣ In the Timeline view, click the open lock icon of the audio track you want to lock.
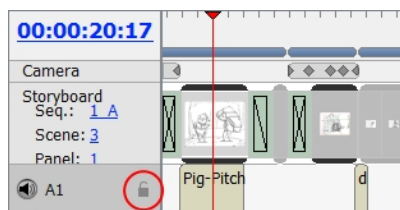
The open lock icon will change to a closed lock icon and the audio track is locked.
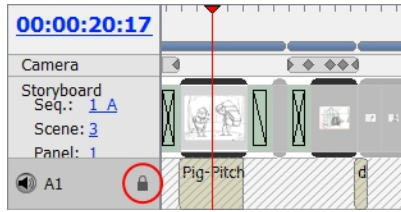
To unlock a locked audio track:

‣ In the Timeline view, click the locked icon of the audio track you want to unlock.
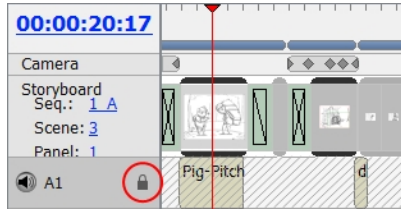
The locked icon changes to an open lock icon and the audio track is unlocked.
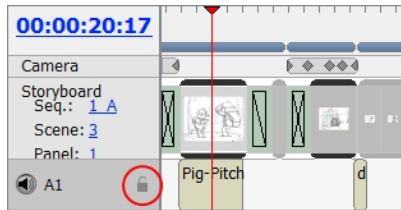
Locking and Unlocking All Audio Tracks

When your project's audio tracks are all unlocked, you can lock them all at the same time using the Lock All Audio Tracks command.

To lock all audio tracks at once:

1. In the Timeline view, make sure that all audio tracks are unlocked, or else, the Lock All Audio Tracks command will be unavailable.

2. Select **Sound > Lock All Audio Tracks**.

NOTE: If an audio track is already locked, the Lock All Audio Tracks command will toggle to Unlock All Audio Tracks.

To unlock all audio tracks at once:

1. In the Timeline view, make sure there is at least one locked audio track. Otherwise, the Unlock All Audio Tracks command will be unavailable.

2. Select **Sound > Unlock All Audio Tracks**.

Locking All Other Audio Tracks

When all audio tracks are unlocked, you can quickly decide to lock all but one.

To lock all other audio tracks:

1. In the Timeline view, hold [Alt] and click the open lock icon of the audio track you want to remain unlocked.
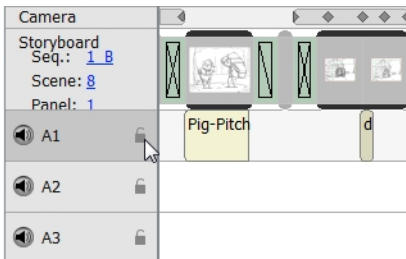
All other audio tracks are locked.
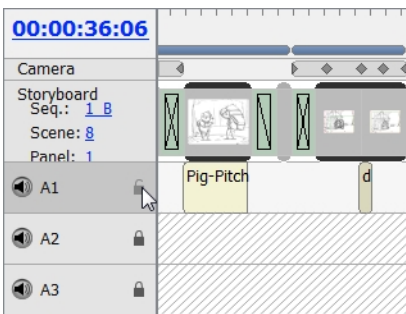
3. Click once more on the audio track's open lock icon while holding the [Alt] key to unlock all audio tracks.

Deleting an AudioTrack

You can delete an audio track at any time. When you do so, all the sounds in the audio track are also deleted. You must work in the Timeline view.

To delete an audio track:

1. In the Timeline view, select the audio track you want to delete.

2. Do one of the following:

   ‣ Select **Sound > Delete Current Audio Track**.

   ‣ Right-click the audio track and select**Delete Current Audio Track**.

   ‣ In the Sound toolbar, click the Delete Current Audio Track 🎵 button.

   The selected audio track is deleted from the Timeline view.

Selecting All Sound Clips Forward

By using a series of keyboard shortcuts, it is possible to select a sound clip and all the sound clips following it at once. These options are also available on panels—see *Changing the Panel Duration* on page 333.

There are four possible options:

Selecting All Sound Clips on the Audio Track Forward

To select all sound clips on a single sound track forward:

1. In the Timeline view, hold [Ctrl]+[Alt] and click the audio clip from which you want the selection to start.

   The audio clip and all the audio clips following it on the same audio track, up until the end of the storyboard project, are selected at once.
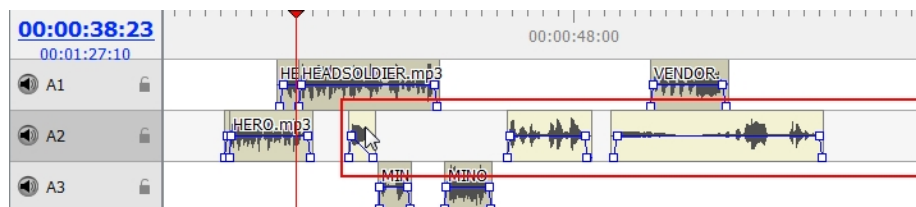
Selecting All Sound Clips on All Sound Tracks Forward

To select all sound clips on all sound tracks forward:

1. In the Timeline view, hold [Ctrl]+[Shift]+[Alt] and click the audio clip from which you want the selection to start.

   The audio clip and all the audio clips following it on all audio tracks, up until the end of the storyboard project, are selected at once.

Selecting All Panels and All Sound Clips Forward

To select all panels and all sound clips forward:

1. In the Timeline view, press [Ctrl]+[Alt]+[Shift] (Windows) or [⌘]+[Alt] (Mac OS X) and click the panel from which you want the selection to start.

   The panel and all the panels following it, up until the end of the storyboard project, as well as all the sound clips in all audio tracks starting from where the play head is positioned are selected at once and can be moved together.

   ‣ If you drag the selection forward, the panel preceding the selection will be extended.
   ‣ If you drag the selection backward, the panel preceding the selection will be reduced until it reaches the minimum length allowed (one frame), then the second panel preceding it will be reduced. Overlapping audio clips will be overwritten by the ones that are selected.

Marking Sound Clips with Custom Colours

Marking sound clips with a custom colour allows you manage them and quickly identify them. This option is also available for marking panels—see Scenes and Panels.

To mark a sound clip with colour:

1. In the Timeline view, select one or more sound clips to mark with a colour.
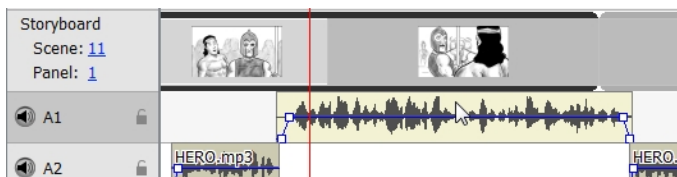
2. Right-click on the selection and select one of the following: **Set Colour > Red**, **Orange**, **Yellow**, **Green**, **Blue**, **Purple** or **Custom**. If you choose custom, the Colour Picker dialog box opens from which you can select a colour.

   The selected audio clip changes to the colour you chose.
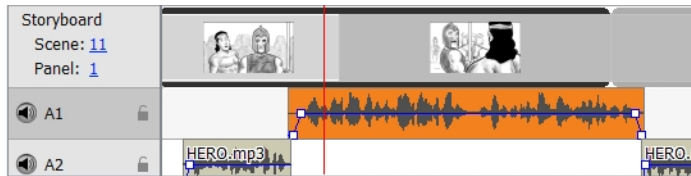
To reset the sound clip colour:

1. In the Timeline view, select the sound clip you want to reset the colour to default. You can also make a multiple selection.
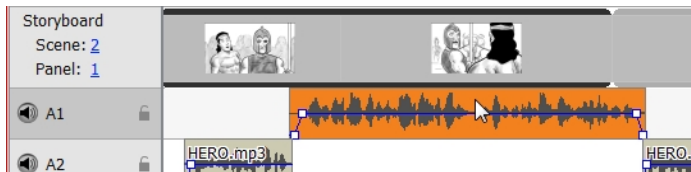
2. Right-click on the selection and select **Set Colour > Default Colour**.

The selected clip colour resets to the default colour.
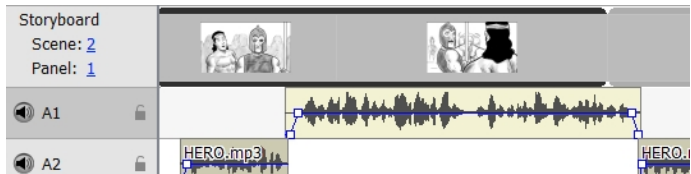
NOTE: The default colour of sound clips is beige. However, you can change this in the Preferences dialog box—see *Preferences* on page 85.

Recording a Sound Guide

You can record sound directly from Storyboard Pro and insert them in the timeline.

To record sound in Storyboard Pro:

1. In the Timeline view, add a new audio track if need be.

2. Place the play head at the frame you want your recording to begin and click select the audio track you want to record your sound guide in.

3. Select **File > Import > Record Sound**.

The Record Sound dialog box opens.
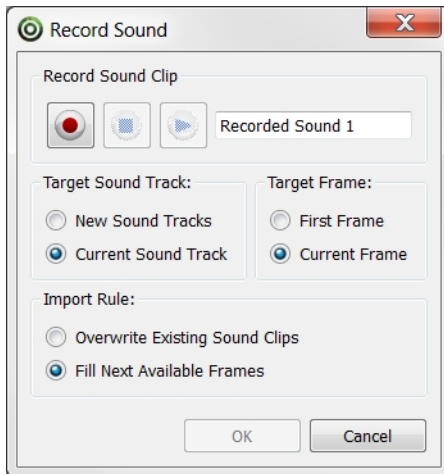
4. In the Target Sound Track section:

    ▸ Select the **New Sound Tracks** option to create a new audio track for the recording.

    ▸ Select the **Current Sound Track** option to record in the selected audio track.

5. In the Target Frame section:

    ▸ Select the **First Frame** option to start the recording on the first frame of the project.

    ▸ Select the **Current Frame** option to start the recording on the current frame.

6. In the Import Rule section:

    ▸ Select the **Overwrite Existing Sound Clips** option so that the resulting audio clip will be position in its entire length, overwriting any existing clip positioned in its way.

    ▸ Select the **Fill Next Available Frames** option so that the recording do not overwrite the position of existing audio clips that are on the same audio track.

7. In the Record Sound Clip section:

    ▸ Name the audio clip.

    ▸ Click the Record ● button to start the recording.

    ▸ Click the Stop ■ button to stop the recording.

    ▸ Click the Play ▶ button to preview the recording.

8. Click OK.

    The recording is imported in the selected audio track of your project.

Adding and Deleting Sound Clips

Once you have created audio tracks, you can now import sound clips. Sound clips are edited bits of sound which are already edited and in digital format, ready for import.

This section includes the following topics:

Importing Sound Clips

You can import sound clips (WAV, AIF, AIFF, or MP3) into an audio track at the first frame or at the current frame. If the sound clip does not already exist in your project, Storyboard Pro copies the file from its present location to the audio folder in your storyboard project folder. You must work in the Timeline view.

> **IMPORTANT:** MP3 files are not recommended for long sequences, as it is a compressed file format. For optimal results, use WAV or AIF sound files when working on a long sequence.

To import a sound clip:

1. In the Timeline view, select an audio track.

2. Do one of the following:

   ‣ Select **File > Import Sound Clips**.
   ‣ Right-click the audio track and select Import Sound Clips.
   ‣ In the Sound toolbar, click Import Sound Files 🎵 button.
     The Import Sound Clips dialog box opens.
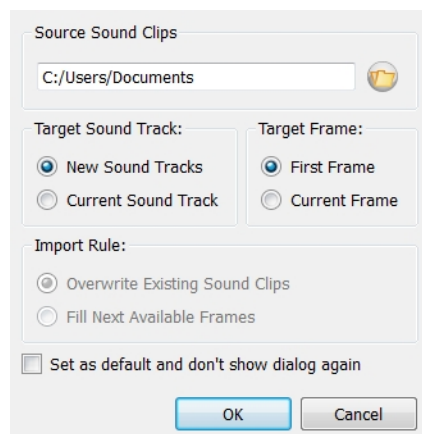
3. Select the sound clip you want to import by typing in the file path or using the Browse button to search for the file you want to use.

4. In the Target Sound Track section, specify whether you want to create an audio track and import the clip into it or import the clip into the selected audio track.

5. In the Target Frame section, indicate the frame at which the sound will begin.

6. If you selected the Current Sound Track option, specify the Import Rule:

 ‣ **Overwrite Existing Sound** Clips: By default, when you import a sound, it will replace sounds that exist in the target frames.

 ‣ **Fill Next Available Frames**: Import the sound clip into the first available empty frames after any existing sound selection.

7. Select the Set as default and don't show dialogue again option if you want to use the current settings the next time you import sound and open a browse box to select a sound automatically.

Deleting a Sound Clip

To delete a sound clip:

1. In the Timeline view, select the clip you want to delete. You can create a multiselection to delete more than one at the same time.

2. Do one of the following:

 ‣ Right-click the sound clip and select **Delete Selected Clips**.

 ‣ In the Sound toolbar, click Delete Sound Clip ♪ button.

 ‣ Press [Delete].

Sound Display

These are the different features that will help make things clear while working with sound.

This section includes the following topics:

Displaying the Waveform

To display the sound clip's waveform:

3. Do one of the following:

   ‣ At the bottom of the Timeline view, click the Menu ⊟ button and select **Show Waveform**.
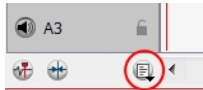
   ‣ From the top menu, select **Sound > Show Waveform** or right-click in the audio track area of the Timeline view and select **Show Waveform**.

   ‣ In the Sound toolbar's extra buttons, click the Show Waveform ⌁ button.
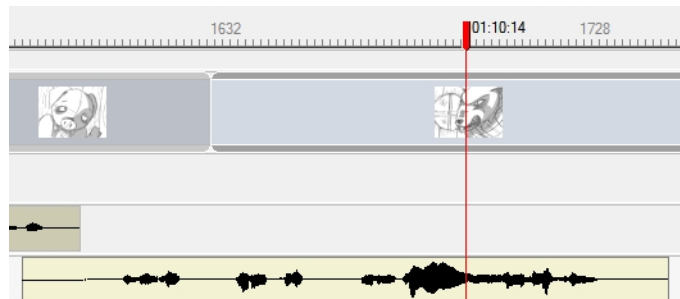
Setting the Soundtrack Size

By default the size of the soundtracks is set to small, but you can modify the size of the different soundtracks of your project individually to increase or decrease their heights.

To set the soundtrack size:

   ‣ In the Timeline view, right-click a soundtrack and select **Track Size > Mini**, **Small**, **Medium** or **Large**.

   The soundtrack is resized.
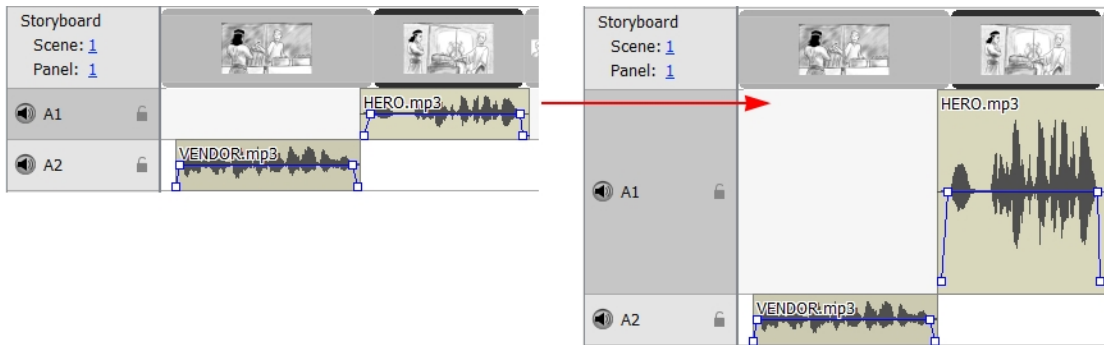
Showing or Hiding the Clip Name

By default, the clip's file names are displayed on the audio blocks. However, you can hide the names if needed.

Clip names are displayed

knocki Wolf-Pitched.aif Pig-Pitched.a   inoutb inoutbreat
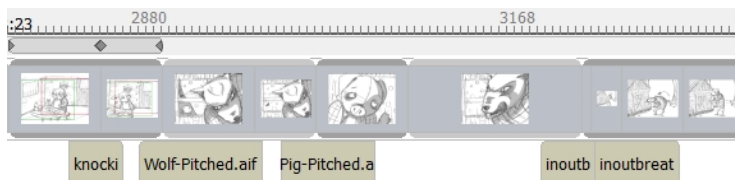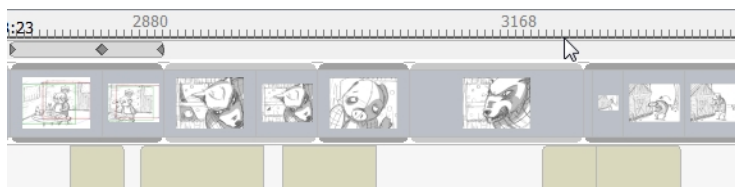
Clip names are hidden

To hide the name of each sound in the audio tracks:

1. Do one of the following:

   ‣ At the bottom of the Timeline view, click the menu button and deselect **Show Sound Clip Names**.
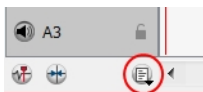
‣ In the Timeline view, right-click and deselect **Show Sound Clip Names**.

2. To show the clips names again, re-enable the Show Sound Clip Names option.

Displaying and Adjusting the Volume Envelope

Once the waveform is displayed, you can also display the playback sound level for each sound clip.

To display and adjust the volume levels of a sound clip:

1. From the top menu, select **Sound > Show Waveform**. This option must be set first.

2. To enable the Show Volume Envelope option, do one of the following:

   ‣ At the bottom of the Timeline view, click the menu ▤ button and select **Show Volume**.
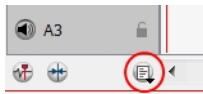
   ‣ From the top menu, select **Sound > Show Volume Envelope**

   ‣ In the Timeline view, right-click in the audio track area of the Timeline view and select **Show Volume**.

   ‣ In the Sound toolbar's extra buttons, click the Show Volume Envelope ⌁ button.

   A blue line, indicating the sound level, is displayed for each sound sequence. White squares mark the points at which the sound changes to a new level.
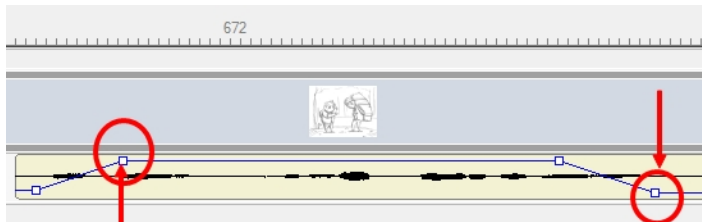
2. Hold down the [Alt] key and click the line to add a new marker. A plus sign (+) on the cursor indicates that a keyframe will be added. You can add an unlimited number of volume keyframes.
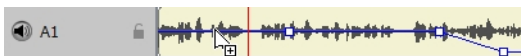
3. Drag an existing marker to adjust the volume at a specific frame. When you drag a volume keyframe, a box appears displaying the current dB level.

3. Hold [Alt] and click an existing volume keyframe to delete it. A minus sign (-) on the cursor indicates that the marker will be deleted.

   The slope of the line indicates how quickly the sound changes from one level to another. If the slope is steep, the change is abrupt. If the slope is less inclined, the volume changes at a more gradual rate.

Sound Scrubbing

With Sound Scrubbing, your sound will play forward or backwards as you scrub through the Timeline view.

To turn on sound scrubbing:

- Do one of the following:
  - At the bottom of the Timeline view, click the Sound Scrubbing ┰ button.
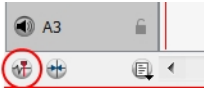
  - From the top menu, select **Sound > Sound Scrubbing.**
  - In the Timeline view, right-click and select **Sound Scrubbing**.
  - In the Sound toolbar's extra buttons, click the Sound Scrubbing ┸ button.

Adjusting the Sound Length and Timing

Most of the editing must be done to your sound before it is imported into Storyboard Pro. There are however, a few tools to help make minor adjustments.

This section is divided as follows:

Shortening and Extending Sound Clips

You can snip the beginning and/or end of the sound clip.

1. Verify that sound is enabled and that the audio track you want to work with is not muted. You may find it easier to edit sound when the waveform is visible.

2. Do one of the following:
   - Click on the starting edge of your clip and drag the cursor right to shorten your clip at the desired timing. This cuts the beginning of the original file from playback.
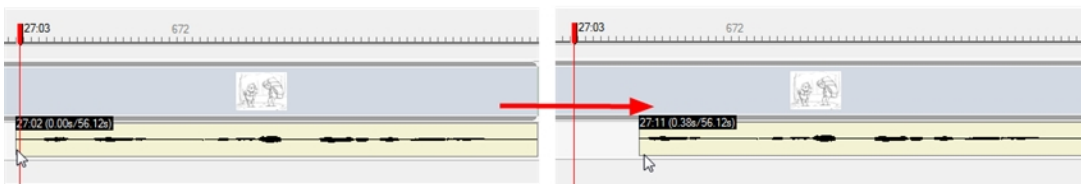
   - Click the ending edge of the clip and drag left to shorten the clip at the desired timing. This cuts the end of the original file from playback.
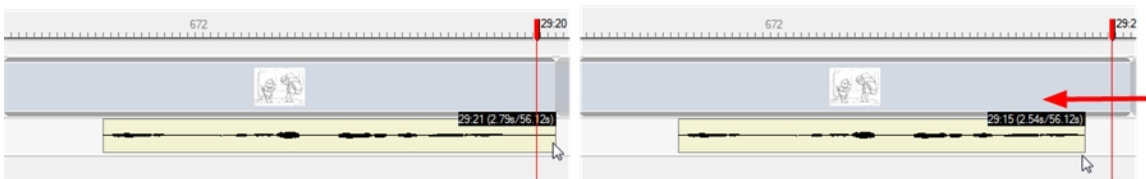
You can play back the sound to hear the edited version of the clip. The original sound clip is not modified. You can drag the edges of the edited clip to expand it to its original length.

Splitting a Sound Clip at the Current Frame

You can cut one clip into many pieces if you want to move parts of a sound to another location.

To split a sound clip in two:

1. Move the red playhead to the frame at which you want to begin the second sound clip that results from the split.
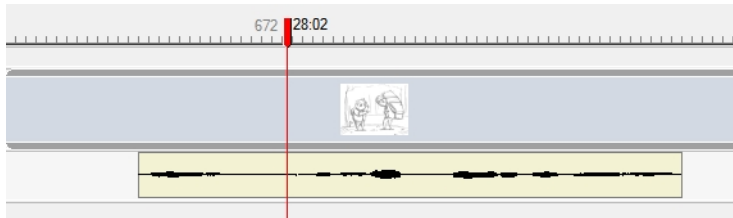
2. From the top menu, select **Sound > Split Clip at Current Frame** or right-click in the audio track area of the Timeline view and select **Split Clip at Current Frame**.
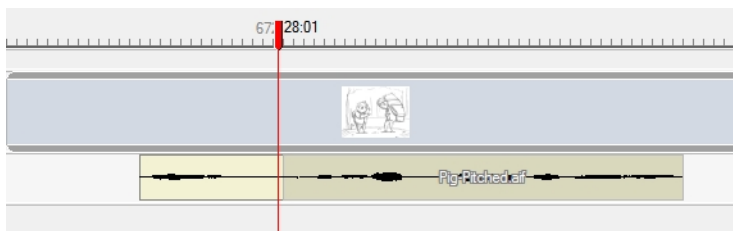
   The sound clip is split. You can move both parts independently.

Moving Multiple Sound Clips

You can move multiple sound clips from the same audio track or different audio tracks at the same time.

To move multiple sound clips:

1. In the Timeline view, draw a selection across the clips you want to select. You can also [Shift] + click to create a contiguous multiple selection or [Ctrl] + click (Windows) or [⌘] + click (Mac OS X) to create a non-contiguous selection.
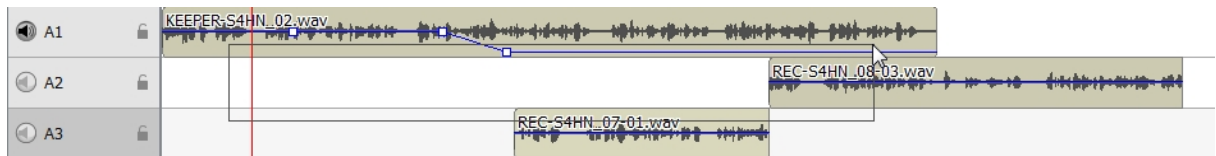
2. Drag the clips to the new position and release.

Transitions between Scenes

By default, transitions between scenes are defined as cuts; the action in the panel at the end of a shot finishes and immediately displays the next scene. In Storyboard Pro, you can add one of two custom transitions between scenes: Wipe or Dissolve.

This chapter includes the following topics:

Transition Types

In Storyboard Pro, you can add one of three custom transitions between scenes.

Dissolve

The Dissolve transition is the typical cross-dissolve transition effect. The images gradually fade in and out to a smooth scene transition.

Edge Wipe

By default, the Edge Wipe will pass from one scene to the other with a wiping motion from left to right. It is possible to customize the effect to change the direction of the wiping motion.

Clock Wipe

By default, the Clock wipe will pass from one scene to the other with a circular clockwise wiping motion. It is possible to customize the direction of the wipe as well as the starting angle.
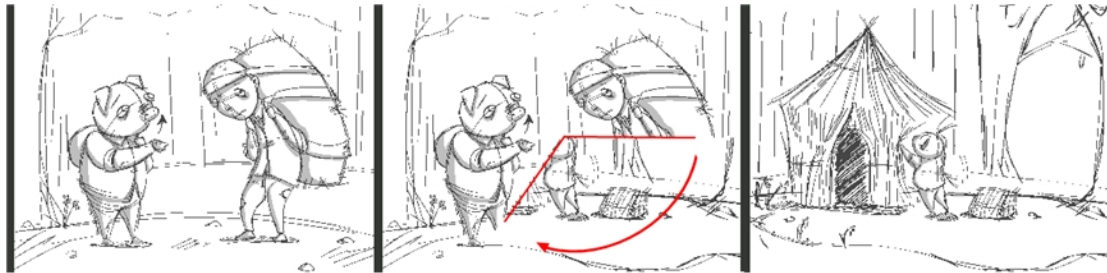
Slide

By default, the Slide transition will pass from one scene to the other by translating the next scene panel from the right side of the camera frame. It is possible to customize the angle and direction.
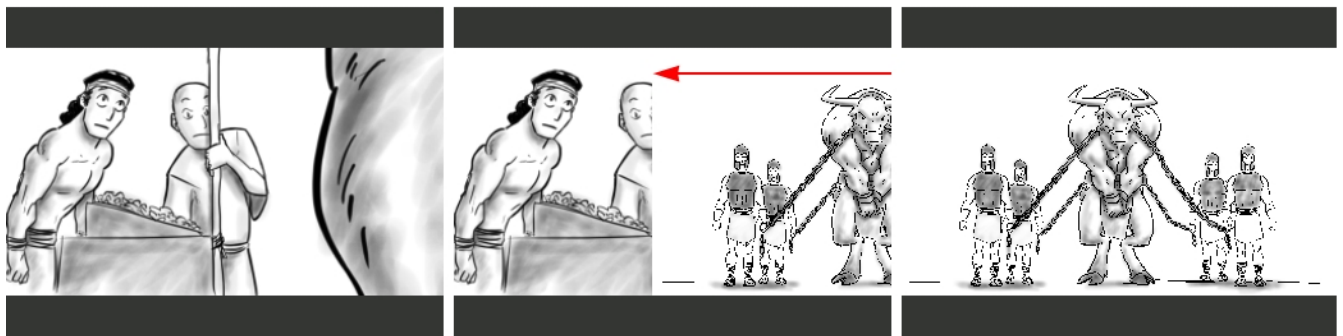
Creating Transitions

It is simple to add a transition between scenes. Once it is created, you can customize it.

To create a transition between two scenes:

1. In the Timeline view, select a panel in the scene in which you want to add a transition.

2. Do one of the following:

    ‣ From the Storyboard toolbar, click the New Transition ⚡ button.

    ‣ Select **Storyboard > Add Transition**.

    ‣ Right-click the scene thumbnails and select **Add Transition**.

A transition is inserted between shots. By default, the transition is a dissolve, although, it can easily be changed to an edge or clock wipe by selecting the transition, and either double-clicking it or changing its type in the Panel view. You can also use the Panel view to change the duration of the transition.

Modifying a Transition

There are a several ways to modify a transition once you have created it:

- *Changing the Transition Type* on page 404

- *Customizing an Edge Wipe Transition* on page 404

- *Customizing a Clock Wipe Transition* on page 405

- *Change Transition Duration* on page 405

Changing the Transition Type

To change the transition type:

1. In the Timeline or Thumbnails view, select the transition.

2. Do one of the following:

   ▸ In the Panel view, select **Edge Wipe**, **Clock Wipe** or **Dissolve** from the Type menu.
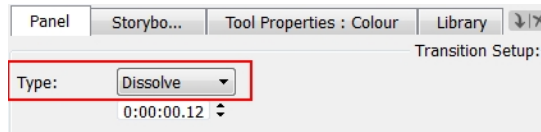
   ▸ Double-click a transition in the Timeline view to change the transition type between Dissolve, Edge Wipe, and Clock Wipe.

Customizing an Edge Wipe Transition

When choosing an Edge Wipe transition type, you can customize the direction angle of the wipe.

To modify the direction angle of an Edge Wipe transition:

1. In the Timeline or Thumbnails view, select the **Edge Wipe** transition.

1. In the Panel view, use either the Direction knob controller or the text field to set the desired angle value.
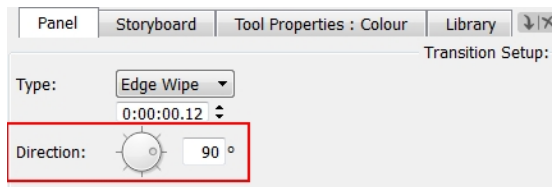
Customizing a Clock Wipe Transition

When choosing a Clock Wipe transition type, you can customize the starting angle and direction of the wipe.

To modify the direction angle of an Edge Wipe transition:

1. In the Timeline or Thumbnails view, select the **Clock Wipe** transition.

2. In the Panel view, use either the Start Angle knob controller or the text field to set the starting angle value.
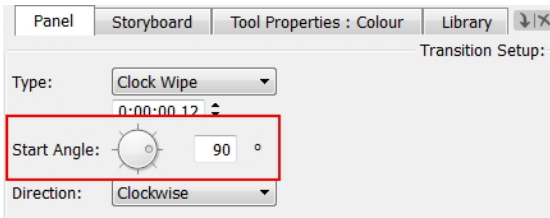
3. In the Panel view, use the Direction menu to select the wipe direction.
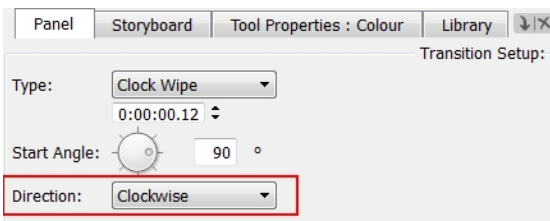
- ▸ Clockwise
- ▸ Counterclockwise

Change Transition Duration

When resizing transitions in the Timeline view, the original ending frame will be preserved, while all the panels touching it will be modified.

To change the transition duration:

1. In the Timeline view, select a transition.

2. Do one of the following:

   - ▸ Change the duration of a transition in the Timeline view by dragging either end to lengthen or shorten.
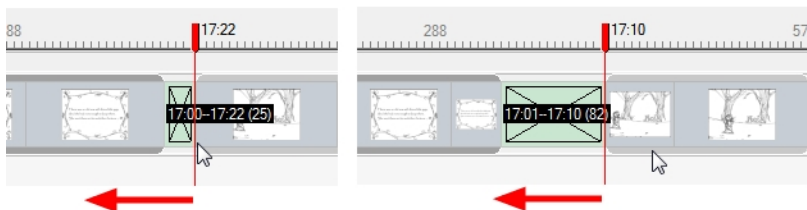
   - ▸ In the Panel view, use the duration field to set the desired value.
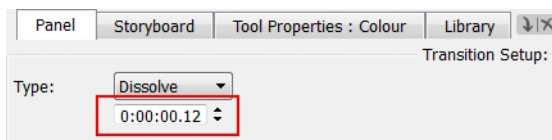
‣ Select **Storyboard > Change Transition Duration**.
The New Transition Duration box opens.
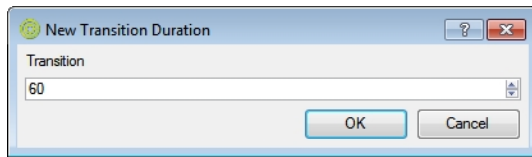
3. In the New Transition Duration box, type in a new duration in frames.

Deleting a Transition

It is s simple to remove any transitions that are no longer necessary.

1. Select the transition you want to remove.

2. Do one of the following:

   ‣ In the Storyboard toolbar, click the Delete Transition button.

   ‣ Right-click the transition and select **Delete Transition**.

   ‣ Select **Storyboard > Delete Transition**.

   ‣ Press [Delete].

Playing Back Your Animatic

You can preview your project as an animatic in Storyboard Pro at any time during its development process. You will be able to preview visual content, including transformations and transitions, and have it synchronized with sounds using the Playback toolbar.

To preview your animatic in Storyboard Pro:

1. In the Playback toolbar, click the Sound button.

   If you want to see how the shots will look with dynamic camera movement, click the Camera Preview button. You will need this option on to preview Camera moves and transitions. When you drag the red playhead while Camera Preview is enabled, it will adjust the Stage view to match the point of view of the camera.

2. In the Timeline or Thumbnails view, select the panel where you want the playback to begin.

3. In the Playback toolbar, click the Play Selection or Play buttons or press [Shift]+[Enter].

4. To play your project in a continuous loop, click the Loop button.

5. You may also scroll through the Timeline view by dragging the red playhead.

6. Select **Play > Previous Frame** or **Next Frame** to skip and play back one frame at a time. Or press [,] and [.].

Preferences

When preparing your animatic in Storyboard Pro, there are preferences you can set to help you work more efficiently.

To open the Preferences dialog box:

1. Do one of the following:

   ‣ Select **Edit > Preferences** (Windows) or **Storyboard Pro > Preferences** (Mac OS X).

   ‣ Press [Ctrl] + [U] (Windows) or [⌘] + [,] (Mac OS X).

This section includes the following topics:

Global UI
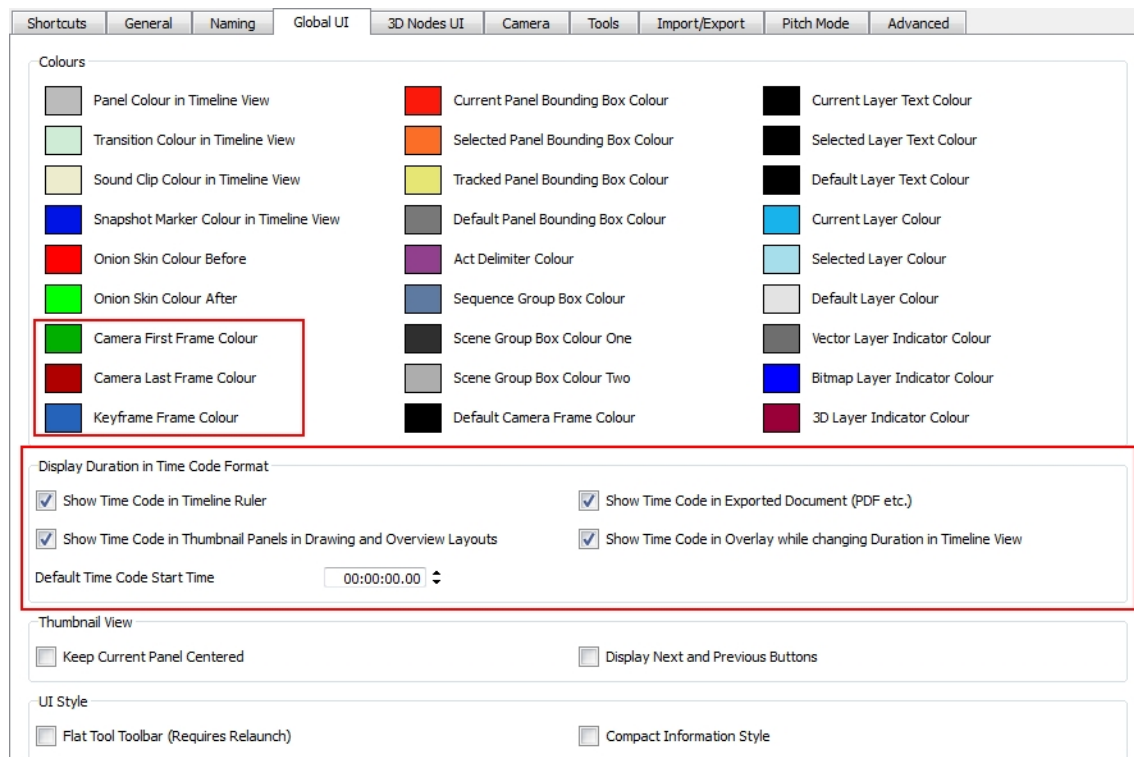
Display Duration in Time Code Format

- Show Time Code in Timeline **Ruler**: Displays the duration, in timecode format, in the Timeline ruler. When turned off the duration is displayed in frames.

- **Show Time Code in Thumbnail Panels in Drawing and Overview Layouts**: Displays the duration, in timecode format, in the Thumbnail panel headers. When turned off the duration is displayed in frames.

- **Show Time Code in Overlay while changing Duration in Timeline View**: Displays the duration, in time code format, when adjusting the length of a panel in the Timeline view. When turned off the duration is displayed in frames.

- **Show Time Code in Exported Document (PDF etc.):** Displays the duration of each panel in timecode format on the PDF export of the storyboard. Disable this preference to display the duration in frames.

- **Default Time Code Start Time:** Use this field to set up the starting timecode value of your storyboard project. By default the timecode start time is set to 00:00:00.00.

Colours

By default, the first camera frame display colour is set to green, the last is set to red, and the in-between keyframes are set to blue. You can customize these display colours—see *Animating the Camera* on page 346.

To customize the display colour:

1. In the GlobalUI tab, click the colour swatch for one of the following:

   ‣ Camera First Frame Colour
   ‣ Camera Last Frame Colour
   ‣ Keyframe Frame Colour

   The Select Colour dialog box opens.

2. Select a new colour—see *Adding Colour* on page 289.

NOTE: Note that these colours also affect the different export formats of your storyboard.
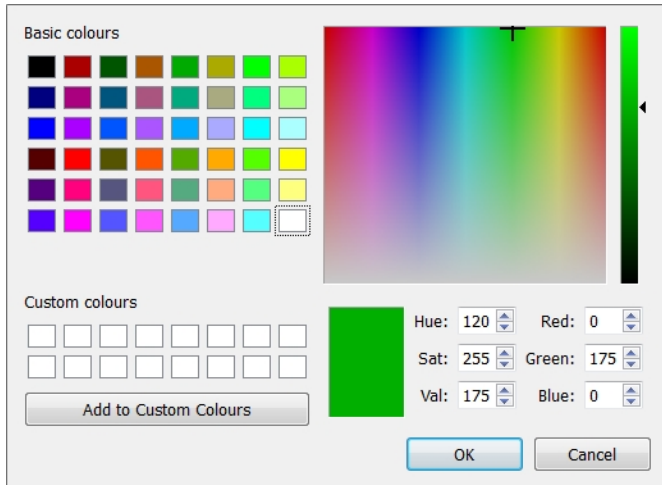
Camera

- *Options* on page 409
- *Point of View* on page 410
- *Keyframes and Control Points* on page 410
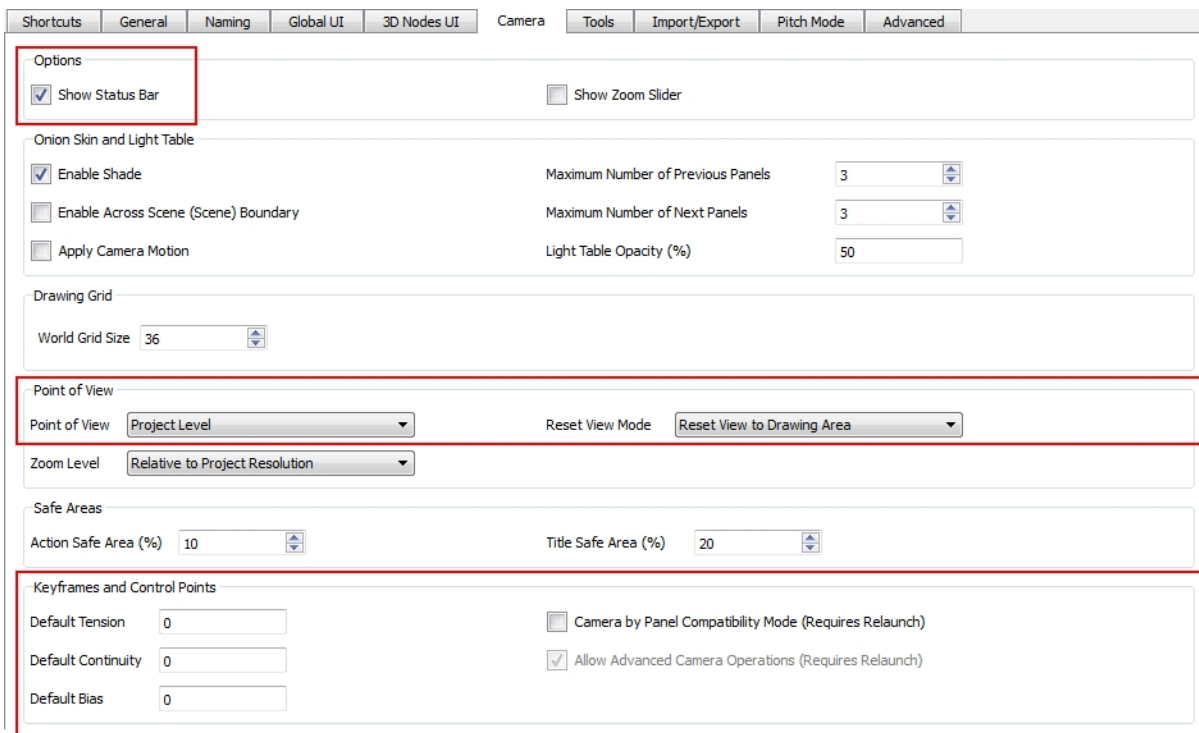
Options

Show Status Bar: Displays the handy status bar at the bottom of the Stage view.

Point of View

Point of View: Choose how your artwork is framed in the Stage view when you go from one panel or scene to the next. The point of view refers to the zoom level, rotation, and transformation of your camera view, not your actual camera keyframes.

- **Project Level**: One global point of view for the entire project.
- **Scene Level**: One point of view per scene.
- **Panel Level**: One point of view per scene.

Reset View Mode: Choose the behaviour of Storyboard Pro when you use the Reset View command in the Stage view. These options only affect your project if you are working in Panel Point of View mode.

- **Reset View to Drawing area**: Resets the view to include the original drawing area.
- **Reset View to Camera Overview**: Resets the view to include an overview of the camera movement in the panel.
- **Reset View to Camera Start**: Resets the view to frame the in position of your camera.
- **Reset View to Camera End**: Resets the view to frame the out position of your camera.
- **Reset View to Current Panel Overview**: Resets the view to include all camera move information in the frame.

Keyframes and Control Points

- **Default Tension**: Continuity controls the smoothness of a transition between the segments joined by a point. Enter a value between -1 and 1 to be used as the default for keyframes and control points.

- **Default Continuity**: Tension controls how sharply the path bends as it passes through a control point or keyframe. Enter a value between -1 and 1 to be used as the default for keyframes and control points.

- **Default Bias**: Bias controls the slope of the path so that it flows towards one side of the motion point or the other. Enter a value between -1 and 1 to be used as the default for keyframes and control points.

- **Camera by Panel Compatibility Mode:** Enabling this preference allows you to work with Storyboard Pro v1.6 keyframes settings—see *Camera by Panel Compatibility Mode Preferences* on page 369

- **Allow Advanced Camera Operations:** This preference works in unison with the Camera by Panel Compatibility Mode preference—see *Allow Advanced Camera Operations Option* on page 371.

Tools

- *Transform* on page 411
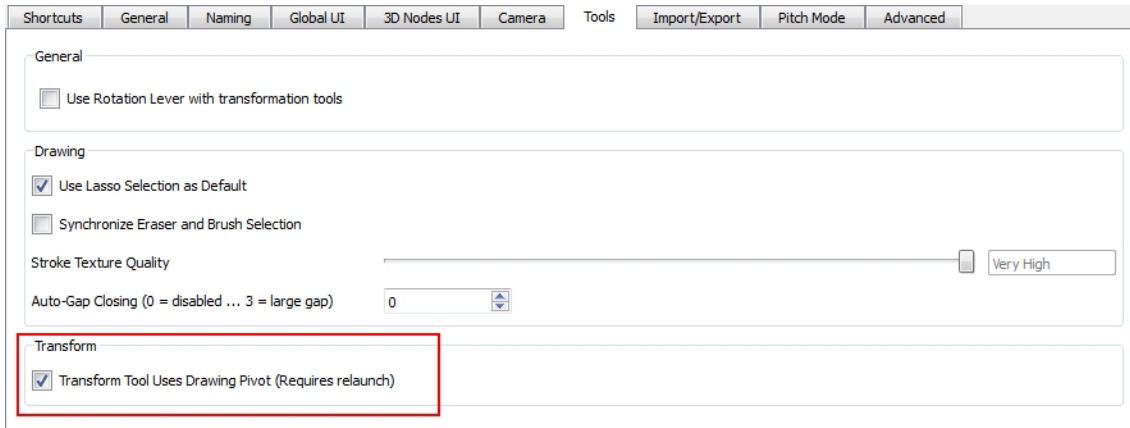
Transform

- **Transform Tool Uses Drawing Pivot (Requires relaunch):** Places the Layer Transformation tool's pivot at the centre of the selected layer's frame. When deselected, the Last Frame Transformation and First Frame Transformation tools' pivot is at the centre of the selected layer's bounding box.

Transform Tool Uses Drawing Pivot (on)   Transform Tool Uses Drawing Pivot (off)
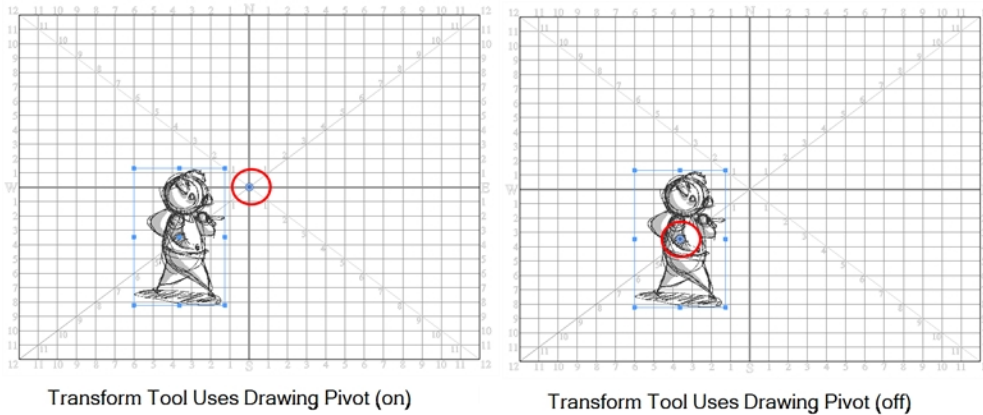
Import/Export

- *Import Sound* on page 412
- *Export to Toon Boom* on page 412
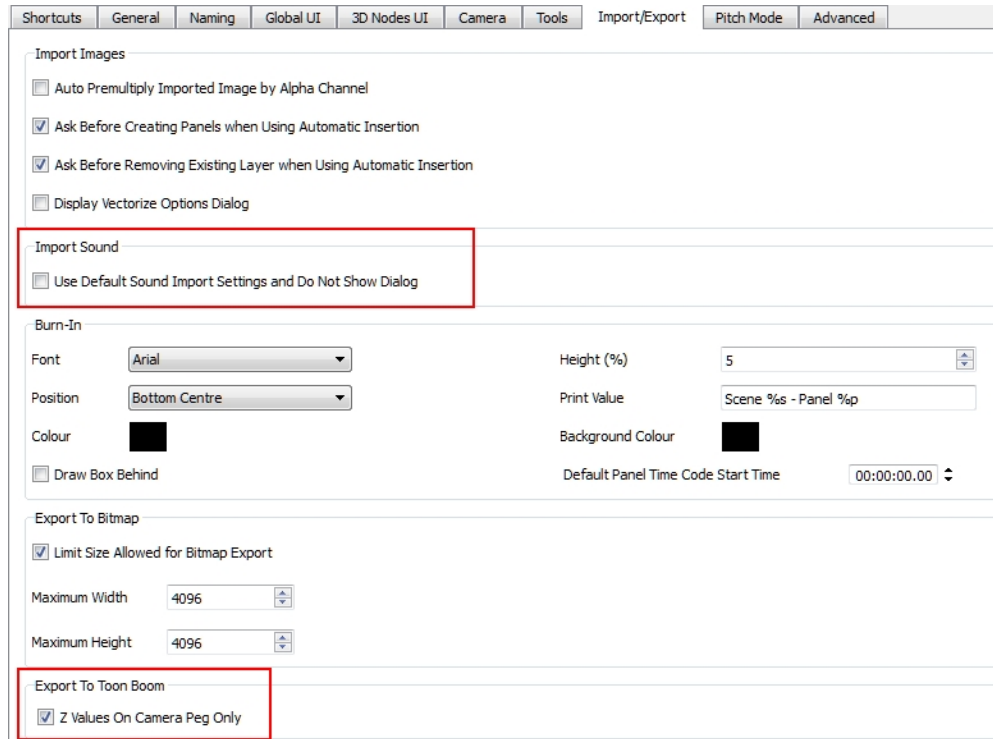
Import Sound

- **Use Default Sound Import Settings and Do Not Show Dialog**: Prevents or allows the opening of the import sound file settings dialog box when importing a sound file. When selected, the settings dialog will not open, and default settings will be used. When deselected, the settings dialog box will open every time, and allow you to adjust settings every time.

Export to Toon Boom

- **Z Depth on Camera Peg Only**:Exports the camera with a Z depth value of 0; Z depth values are on the peg. This makes it easier to see the camera field value in the Xsheet. It is recommended to enable this preference if you will be editing camera moves from the Xsheet.

Chapter 11: Pitching Your Storyboard

Storyboard Pro has a Pitch Mode workspace that was is created specifically for pitching a storyboard or concept to a group of people.

This chapter includes the following topics:

- *Pitch Mode* on page 413
- *Working with Captions* on page 422
- *Voice Annotations* on page 424
- *Pitch Mode View* on page 425
- *Preferences* on page 425

Pitch Mode

When pitching your storyboard, it is helpful to use Storyboard Pro to visually present your story or concepts. Storyboard Pro provides a workspace designed specifically for this called the Pitch Mode workspace.

This chapter includes the following topics:

- *Pitch Mode Workspace* on page 413
- *Navigating in the Camera View* on page 422

Pitch Mode Workspace

The Pitch Mode workspace contains a different set of views than the other workspaces, and occupies the entire display screen. Access is only given to a certain number of features. This maximizes the viewing space by removing any unnecessary distractions such as toolbars and buttons, allowing your audience to focus solely on the story being pitched. It also has an easy comment feature that is not available in the other workspaces. The views in this workspace do not have tabs or names. You cannot add or remove views. However, you can hide the side views temporarily to maximize the Camera view.

There is also a Pitch Mode view, that behaves in almost the same way as the Pitch Mode workspace, but provides access to the other views and menus—see *Pitch Mode View* on page 425.

This section includes the following topics:

- *Accessing the Pitch Mode Workspace* on page 414
- *Exiting Pitch Mode* on page 415

> **NOTE:** For more information on the **Thumbnails**, **Camera**, and **Caption** views, see *Discovering the Interface* on page 53, *Setting the Camera Frame* on page 340, and *Captions* on page 99.

Accessing the Pitch Mode Workspace

The **Pitch Mode** workspace can be accessed in the same way as other default workspaces, but you must exit the mode in a different way—see *Exiting Pitch Mode* on page 415.

To load the Pitch Mode workspace, do one of the following:

▸ From the View toolbar, click the **Pitch Mode** button.

- ‣ From the Workspace toolbar, select **Pitch Mode**.
- ‣ From the top menu, select **Windows > Workspace > Workspace > Pitch Mode.**
- ‣ Press [8].

Exiting Pitch Mode

When in Pitch Mode, you do not have access to the toolbars, but you can easily exit by using the Exit Pitch Mode button at the bottom of the screen. This is useful when in full screen mode and you have no longer access to the top menu. To exit the workspace, you can also switch to another workspace using the top menu.

To exit the Pitch Mode workspace:

- ‣ In the Control Panel view, click the Exit Pitch Mode 🚪 button.

Camera View

The Camera view displays your drawings, camera moves and transitions. You do not have access to your layer list in this mode. All layers that are enabled are shown.

You can use the Pitch Mode workspace to add comments based on the given feedback. A special Comments layer can automatically be added to your drawing for making notes and corrections.

If you do not want to see the transitions or camera motions, deselect the Camera Preview 📷 button in the Control Panel view.

Expanding the Camera View Width and Height

The Camera view is the main area that your audience will want to see. You can enlarge this viewing area by expanding and collapsing the view.

To expand/collapse the Camera view: show or hide the side and bottom views:

‣ In the Control Panel view, Thumbnails, or Caption view, click the **Expand/Collapse Arrow** button to hide the view.
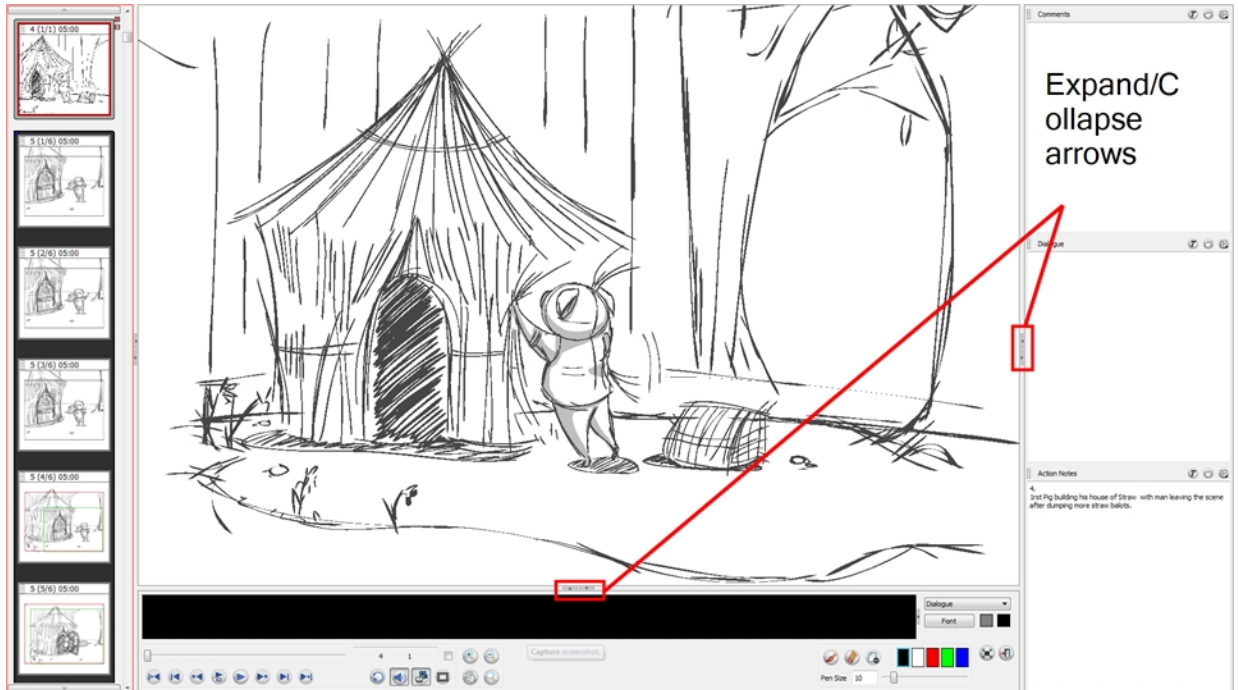
‣ You can also use the entire screen to optimize your workspace. To toggle full screen mode, click the **Full Screen Mode** button in the Control Panel view or press [Ctrl]+[Shift]+[F] (Windows) or [⌘]+[Shift]+[F] (Mac OS X).

Onion Skinning

Next drawing   Current drawing   Previous drawing

In the Pitch Mode workspace, you can use the Onion Skin feature to see your previous and next panels—see *Onion Skin* on page 253.

▸ To see the onion skinning, deselect the Camera Preview [icon] button in the Control Panel view.

Thumbnails View

The Thumbnail view is very similar to the Thumbnail view found in the other workspaces and the View menu. It allows you to see the scenes, panels, and transitions in your storyboard. The main difference is that you cannot see the drawing layers included in the panel, only the composited image of all your layers—see *User Interface* on page 53.

You can easily navigate through the thumbnails without clicking on them by using the default keyboard shortcuts [A] and [F].

Caption View
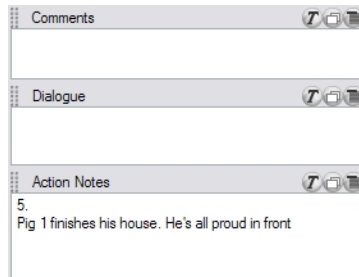
The Caption view displays the captions related to the current panel. You can see the dialogue, action notes or any other caption available in your storyboard. You can also add, remove or edit captions the same way as you do in the Panel view—see *Captions* on page 99.

Control Panel View

1. Scene scrubber
2. Playback toolbar
3. Camera and audio tools
4. Comments setting and tools
5. Full screen mode
6. Exit Pitch mode
7. Selected caption settings
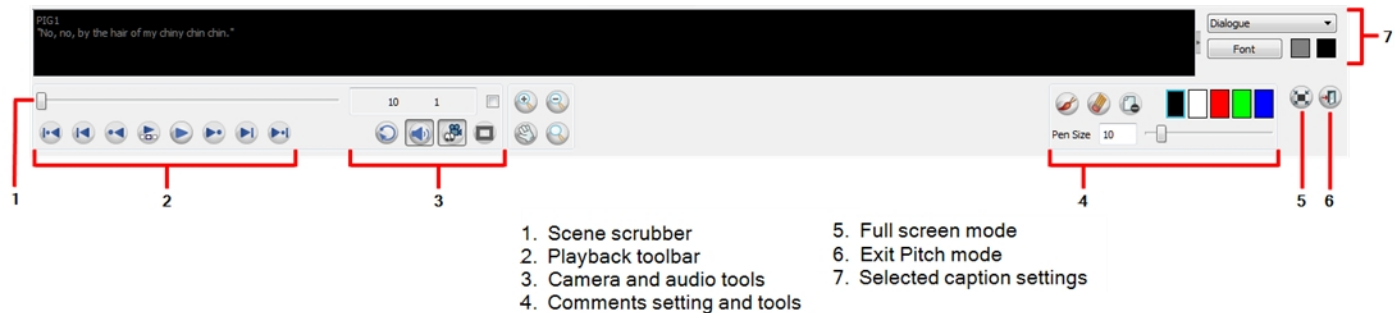
The Control Panel view is where you play back the storyboard, see the dialogue or selected caption for the current panel, and access the comments settings and tools.

This section includes the following topics:

- *Playing Back Your Storyboard* on page 418

- *Scrubbing Scenes* on page 419

- *Automatically Playing Camera Moves* on page 419

Playing Back Your Storyboard

The Control Panel view contains the Playback toolbar for playing and navigating your storyboard—see *Playing Back Your Animatic* on page 406.

Scrubbing Scenes

You can scrub through your scene, view a specific point in the scene, see it in slow motion, or check a particular section.

This slider lets you scrub through all the panels in a scene. You will see the camera motions and the transitions at the speed you want by sliding left or right. Sliding left brings you to the beginning of the scene and sliding right brings you to the end. Note that transitions, camera moves, and all panels will be displayed.

NOTE: If you do not want to see the transitions or camera motions, deselect the **Camera Preview** button in the Control Panel view.

As you select or scrub through your panels and scenes, the name and number of the current scene and panel are displayed.
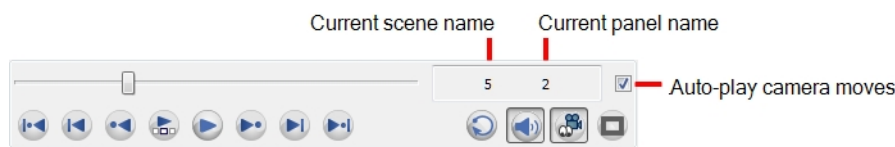
Automatically Playing Camera Moves

As you navigate through the panels of your storyboard, you can automatically play any camera motion encountered in the panels.
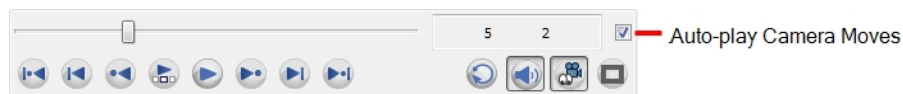
To automatically play camera moves:

‣ In the Control Panel view, select the **Auto-play Camera Moves** option.

NOTE: You can also press [A] and [F] or simply select panels in the Thumbnails view to flip through your panels. When you select a panel that contains a camera move, it will automatically play.

Adding and Deleting Comments

When you present your storyboard, you will most likely receive comments and feedback about your work. The Pitch Mode workspace allows you to easily draw comments and corrections over your panels.

In Pitch Mode, you do not have access to the drawing layers included in your panels, so when you draw corrections on your panel, a new Comments layer is automatically added for you on top of the panel. You can use this new Comments layer the same way as any other drawing layer in your scene.

Adding comments and corrections in Pitch Mode is easy. As soon as you start drawing using the Brush tool, the Comments layer is added for you.

If you no longer require a Comments layer, you can easily delete it while you are still in the Pitch Mode workspace.
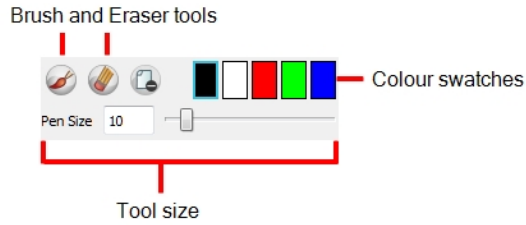
To add comments and corrections:

1. In the Comments section of the Control Panel view, select the Brush ![brush icon] tool or press [Alt]+[B].

2. Click a colour swatch to select a colour for your brush. To change the colour, double-click the colour swatch to open the Colour Picker. Select a new colour–see *Colours* on page 289.
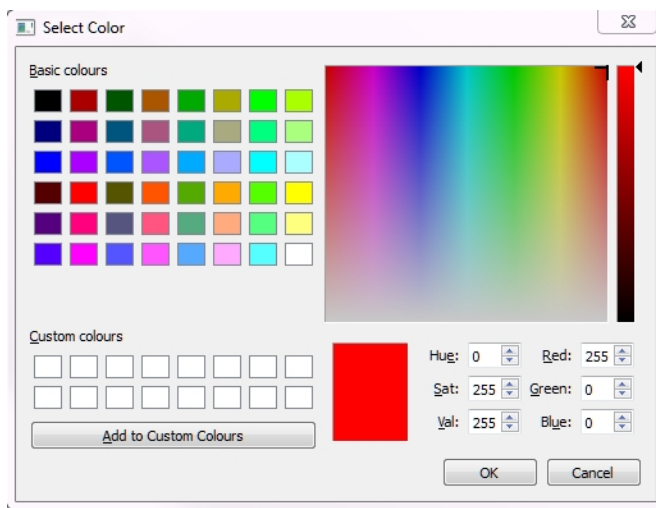
3. Set the brush size.

4. In the Camera view, draw your correction.

A Comments layer is added on top of your layers. To access the Comments layer, exit the Pitch Mode workspace and return to any of the other default workspaces.

‣ To erase a correction, use **Eraser** 🖊 tool or press [Alt]+[E].

To delete a comment:

‣ In the Comments section of the Control Panel view, click the Delete Layer 🔲 button.

The Comments layer is deleted. You cannot delete any other layers.

Grid

Displaying the grid can be useful as you draw corrections and comments. It will only be available for the Comments layer—see *Setting Up the Drawing Space* on page 181.

To display the grid, do one of the following:

‣ Press [Ctrl]+[G] (Windows) or [⌘]+[G] (Mac OS X).

Navigating in the Camera View

If you want to zoom in and out or pan in the Camera view, you can use the View tools available in the Control Panel view.
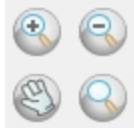
▸ To navigate in the Camera view, deselect the Camera Preview [icon] button in the Control Panel view.

Button	Name	Keyboard Shortcut
[icon]	Zoom	[2] for zoom in [1] for zoom out When the Zoom tool is selected, hold Alt as you click to zoom out.
[icon]	Zoom In	[2]
[icon]	Zoom Out	[1]
[icon]	Pan	Spacebar

Working with Captions

As you play back your storyboard, your audience may want to see the dialogue or action notes as subtitles. For that reason, the **Pitch Mode** workspace lets you select one of the caption fields available in your storyboard and display it at the bottom of the **Camera** view. By default, the Dialogue caption is selected.

This section includes the following topics:

Showing and Hiding the Caption Tools

If you want to make the selected caption field larger, you can hide the **Caption** tools area.

To hide the Caption Tools area:

▸ In the Caption Tools area, click the Arrow button to hide the settings.
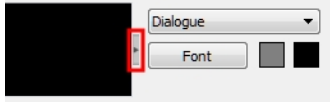
To show the Caption Tools area:

▸ Hover the cursor at the edge of the caption, when you see a splitter cursor, drag left to reveal the Caption Tools area.

Selecting a Caption

In the Control Panel view, you will find a drop-down menu that will allow you to select the captions in your storyboard. Note that you cannot select a sketch caption. Only text captions can be selected.

To select a caption:

▸ From the Caption menu, select a caption to display below the Camera view.
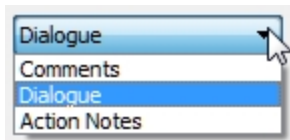
Customizing the Look of Captions

By default, the selected caption field has a black background and a gray font. You can change the colours and the font.
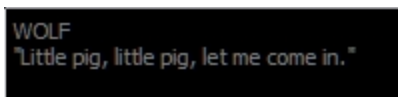
To customize the look of captions:

In the Caption Tools area, do any of the following:

▸ **Background Colour**: Double-click the background colour swatch. In the Colour Picker window, select a new colour.
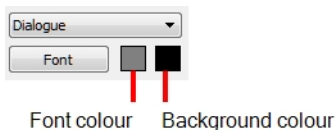
▸ **Font Colour**: Double-click the font colour swatch. In the Colour Picker window, select a new colour.

▸ **Font**: Click **Font**. In the Select Font window, set the font parameters.

Voice Annotations

Since the Pitch Mode workspace is all about reviewing and approving your storyboard, you can also record voice annotations—see *Voice Annotations* on page 430.

NOTE: The Voice Annotation tools are not displayed by default; you must enable the sound tools in the Preferences dialog box.

To enable the sound tools:

1. Do one of the following:

   ‣ Select **Edit > Preferences** (Windows) or **Storyboard Pro > Preferences** (Mac OS X).

   ‣ Press [Ctrl] + [U] (Windows) or [⌘] + [,] (Mac OS X).

2. In the Preferences dialog box, select the **Pitch Mode** tab.

3. In the Control Panel section, select the **Display Sound Tools** option.

The voice annotation tools appear in the Control Panel view.

Pitch Mode View
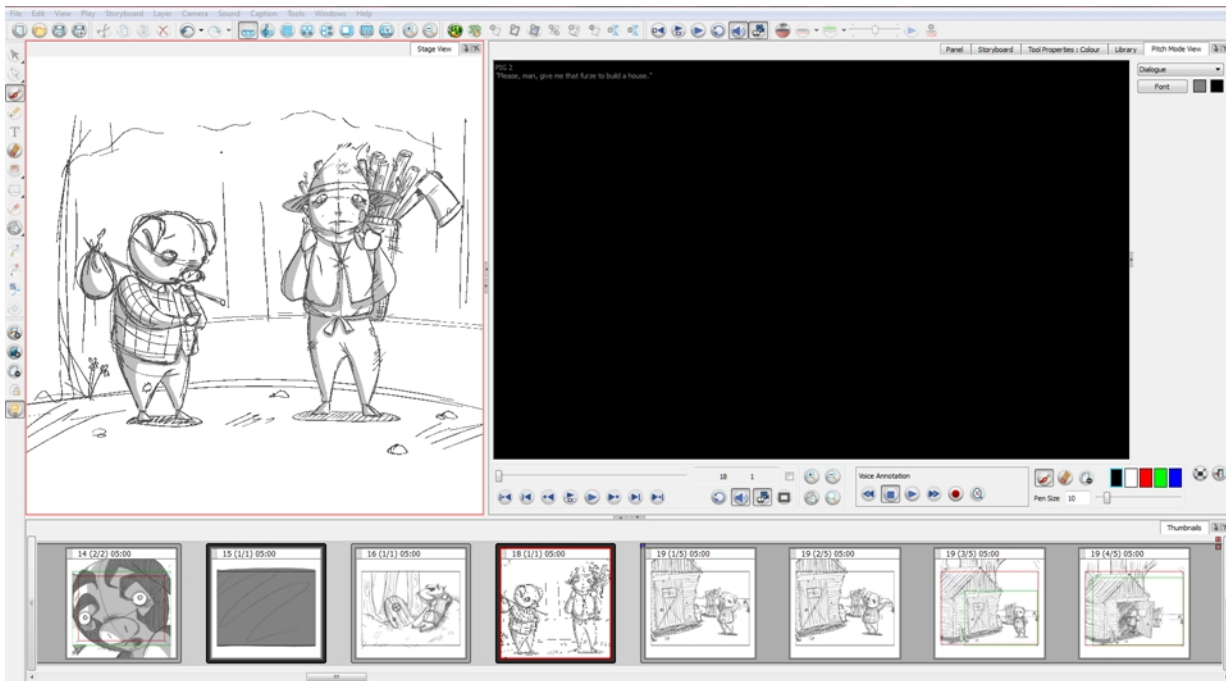
In Storyboard Pro there is a Pitch Mode view as well as the Pitch Mode workspace. This behaves in almost the same way as the Pitch Mode workspace, but provides access to the other views and menus.

When the Pitch Mode view is part of your workspace, all the tools and functions that cannot be used in Pitch Mode will be dimmed. You will no longer have access to your drawing layers. To return to the normal mode, you must close the Pitch Mode view completely.

To open the Pitch Mode view, do one of the following:

‣ Select **Windows > Pitch Mode View**.

‣ In the Panel view, select **Pitch Mode** from the View ↓ menu.

To close the Pitch Mode view:

‣ Click the Close ✕ button.

Preferences

While working in Pitch Mode, there are some preferences that can optimize the display.

- *Memory* on page 426
- *Control Panel* on page 426

To open the Preferences dialog box:

1. Do one of the following:

‣ Select **Edit > Preferences** (Windows) or **Storyboard Pro > Preferences** (Mac OS X).

‣ Press [Ctrl] + [U] (Windows) or [⌘] + [,] (Mac OS X).

Memory

While working in Pitch Mode, you can turn off the auto-save feature to prevent the system from continuing to save.
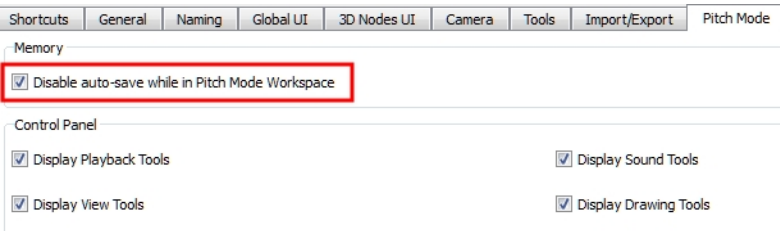
> **NOTE:** This preference is only available when the Auto-save preference is enabled in the Advanced tab.

Control Panel

These options affect the display of tools in the Control Panel view.

- **Display Playback Tools**: Displays the Playback toolbar in the Control Panel view.

- **Display View Tools**: Displays the View toolbar in the Control Panel view.

- **Display Sound Tools**: Displays the Voice Annotation tools in the Control Panel view.

- **Display Drawing Tools**: Displays the Drawing and Comments tools in the Control Panel view.

Chapter 12: Storyboard Supervision

Storyboard Pro goes beyond the storyboard and animatic creation tasks by providing powerful tools for the supervision of a storyboarding project.

Project managers, storyboard supervisors and artistic directors now have an efficient supervision tool to help them track the changes and communicate their feedback, corrections and such to the storyboard artists.

This chapter includes the following topics:

- *Tracking Changes* on page 427
- *Voice Annotations* on page 430
- *Project Management* on page 432

Tracking Changes

In Storyboard Pro, you can track changes in the storyboard's panels. This allows the storyboard artist to integrate any comments the supervisor has made, and the supervisor can easily track any changes and validate or comment on them.

This section includes the following topics:

- *Automatically Tracking Changes* on page 427
- *Tracking Changes by Date* on page 428
- *Validating Changes* on page 429

Automatically Tracking Changes

Storyboard Pro lets you automatically detect any changes in your project, and adds a visual notification in the Thumbnails and Timeline views.

To enable auto tracking:

‣ Select **Storyboard > Track Changes > Auto Tracking Mode**.

Once the Auto Tracking Mode is enabled and you edit a panel, a yellow rectangle appears around the panel in the Thumbnails and Timeline views. This visual indicator allows the supervisor to rapidly locate any panels which have changed. A new temporary caption field is added to the tracked panel's Panel view.
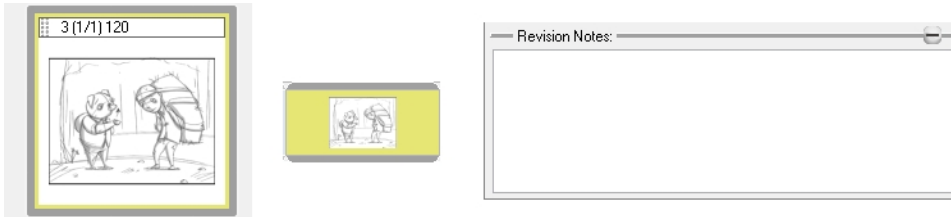
You can add notes to the Revision Notes caption. Note that the text you type here will also be displayed in the Track Changes dialog box during the validation process—see *Validating Changes* on page 429.
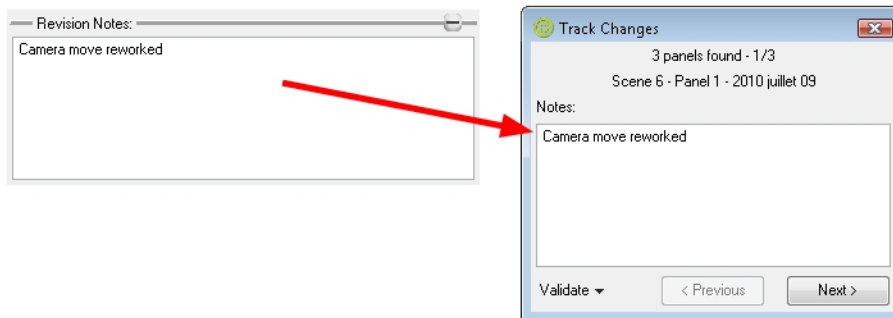
Tracking Changes by Date

You can also track changes by date. If a storyboard becomes very large, it may be easier to track changes made on a specific date. This dialog box contains options to help you track changes even more efficiently.

To track changes by date:

1. Select **Storyboard > Track Changes > Track Changes by Date**.

   The Search by Date dialog box opens.
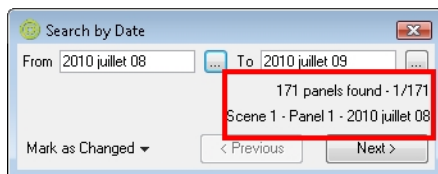
2. Use the From and To fields to define a particular time range in which to track changes. If you want to track changes done on one specific day, place that day's date in both the From and To fields. Click the From button and select the first date. Only the dates at which a change occurred will be available. The other dates will appear dimmed.

3. Select the first date and click OK.

4. Repeat these steps to select the To date.

428
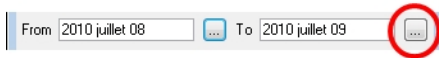
5. Once you set up your dates, the information is updated in the space below:
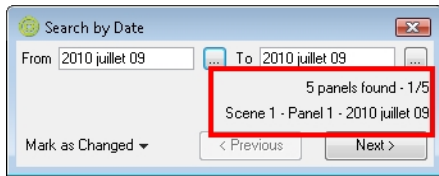
   ▸ The first line displays the number of panels found in the storyboard that have been modified during the defined time range, and the panel that is currently selected.

   ▸ In this example, five panels fit the description, and the first panel of the five is currently selected.

   ▸ The second line displays information about the currently selected panel, such as which scene it is part of, the name of the panel, and the date it was last modified.

6. Use the Next and Previous buttons to jump from one modified panel to the next.
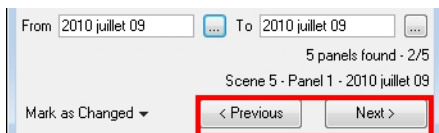
7. You can use the drop-down menu in the bottom-left corner to modify the status of the selected panel.

   ▸ Mark as Changed: Marks the currently selected panel as being edited on the current date; this is the default option. Simply click on the button to activate it, no need to open the drop-down menu.

   ▸ **Mark Scene as Changed:** Marks the scene of the currently selected panel as being edited on the current date.

   ▸ **Mark All as Changed:** Marks all the storyboard panels as being edited on the current date.

Validating Changes

When you use the **Auto Tracking Mode** feature, you can use the **Validate Changes** option to follow up on these changes.

To validate changes:

1. Select **Storyboard > Track Changes> Validate Changes**.

   The Track Changes dialog box opens.
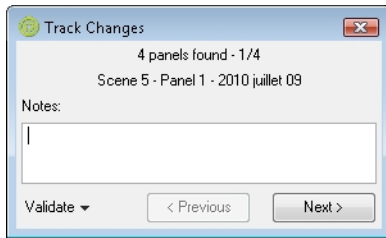
- ‣ Useful information is displayed on the top part of the dialog box:
- ‣ The first line displays the number of panels found in the storyboard that were modified while the Auto Tracking Mode was enabled, as well as which of the panels that fits the description is currently selected.
- ‣ The second line displays information about the currently selected panel, such as which scene it is part of, the name of the panel, and the date it was modified.

2. Use the Notes field to enter text about the selected panel. This information will be available in the tracked panel Panel view in the Revision caption. If notes were added in the Revision Notes caption field, they will be displayed in the Revision Notes field of the Track Changes dialog box.

NOTE: This caption is temporary; it will be removed when the change is validated.
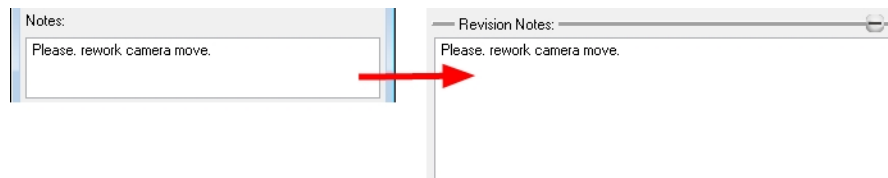
3. Use the Validate drop-down menu to select a validating option:

- ‣ **Validate**: Validates the currently selected panel. This is the default option, simply click on the button to activate it, there is no need to use the drop-down menu.
- ‣ **Validate All**: Validates all of the panels in the storyboard. Click on the arrow button to display the drop-down menu and activate the command.
- ‣ **Validate Scene**: Validates the scene that the currently selected panel is part of. Click on the arrow button to display the drop-down menu and activate the command.

4. Use the Next and Previous buttons to navigate from one tracked panel to the other.
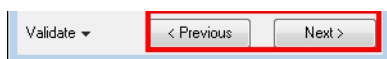
NOTE: Refer to the *Automatically Tracking Changes* on page 427 section to learn about the Auto Tracking Mode feature and how to enable it.

Voice Annotations

In Storyboard Pro, you can provide the storyboard artists with voice annotations as well as written notes.

This section includes the following topics:

Recording Voice Annotations

Recording a voice annotation is quite simple. All you need is a microphone correctly connected to your computer and Storyboard Pro.

After the voice annotation has been recorded, the Voice Annotations section indicates the total number of annotations, displaying the order of the current voice annotation in the sequence and the total number of voice annotations associated with the panel. As you record voice annotations, they accumulate in sequence without being overwritten. You can select and play back any of the annotations.

To record voice annotations:

1. Verify that you have a working voice recording device and that it is correctly connected to your computer.

2. In the Thumbnails view, select the panel on which you want to leave a voice annotation.

3. Display the Panel view.

   ‣ If the Panel view is not part of your current workspace, select **Windows > Panel**.

4. In the Voice Annotations section, click the Record Voice Annotation ● button.

   The Record a Voice Annotation dialog box opens.

   ‣ Click the Record ● button to begin recording.

   ‣ Click the Stop ■ button to stop the recording.

   ‣ Click the Play ▶ button to preview your recording.

> **NOTE:** If you try to record your voice and the voice recording device is improperly connected or malfunctioning, a warning message will appear. If this happens, check the voice recording device.

Listening to Voice Annotations

Once a voice annotation has been added to a panel, you can listen to it using the playback controls.

1. In the Thumbnails view, select the panel with the voice annotation which you want to listen to.

2. In the Panel view, do any of the following in the Voice Annotations section:

   ‣ Click the Next Voice Annotation ▶▶ and Previous Voice Annotation ◀◀ buttons to select the annotation you want to listen to. Use the order display in the Voice Annotation section to see which annotation is selected.

   ‣ Click the Play Voice Annotation ▶ button to play back the selected voice annotation.

   ‣ Click the Stop Voice Annotation ■ button to stop playback.

Deleting Voice Annotations

When a voice annotation is no longer required, you can delete it.

To delete a voice annotation:

1. In the Thumbnails view, select the panel with the voice annotation you want to delete.

2. In the Panel view, do any of the following in the Voice Annoations section: In the Voice Annotations section:

   ‣ Click the Next Voice Annotation ⏩ and Previous Voice Annotation ⏪ buttons to select the annotation to delete. Use the order display in the Voice Annotation section to see which annotation is selected.

   ‣ Click the Delete Voice Annotation ⊗ button.

Project Management

To distribute work to different board artists, it is necessary to split up a large storyboard into different files. Once the work on all of the parts is completed, you must reassemble them into the same project to complete the storyboard.

This section includes the following topics:

- *Splitting a Storyboard* on page 432
- *Extracting a Storyboard* on page 433
- *Merging Your Project Storyboard* on page 434
- *Inserting Scenes* on page 435
- *Merging and Replacing Scenes* on page 436

Splitting a Storyboard

Using the Split option, you can divide your storyboard into two parts. Each part can be saved as a different file. You can choose to save either the first half of the project, the last half of the project, or both. You can also choose to preserve the original project intact, or to remove the panels from the original project. The selected panel determines the point of division.

To split a storyboard project:

1. In the Timeline, drag the red playhead to the panel where you want the split to take place.

2. Select **File > Project Management > Split**.
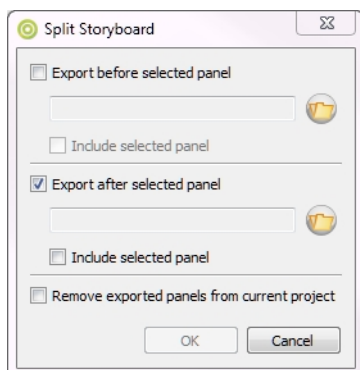
The Split Storyboard window opens.

3. Select one or both options:

   ‣ **Export before selected panel**: Exports all panels before the selected panel into a new file.

   ‣ **Export after selected panel**: Exports all panels after the selected panel into a new file.

4. For one or both options:

   ‣ Use the browse button to choose a location and create a file name.

   ‣ Select the **Include selected panel** option to include the selected panel in the export.

5. Select the **Remove exported panelsfrom current project** option to remove the panels you have selected to export from the current project. If you do not check this option, you will be left with an intact copy of your storyboard, along with one or both divisions as a new project file(s).

> **NOTE:** If you chose to export both the panels before and after the selected panel along with this option, then only a blank panel will be left in your current project.

Extracting a Storyboard

Use the Extract option to divide your storyboard into several parts. Each export will be saved as a different file. You can choose to save an intact copy of the entire storyboard or you can divide the project into separate files.

To extract different scenes from your storyboard:

1. Select **File > Project Management > Extract**.
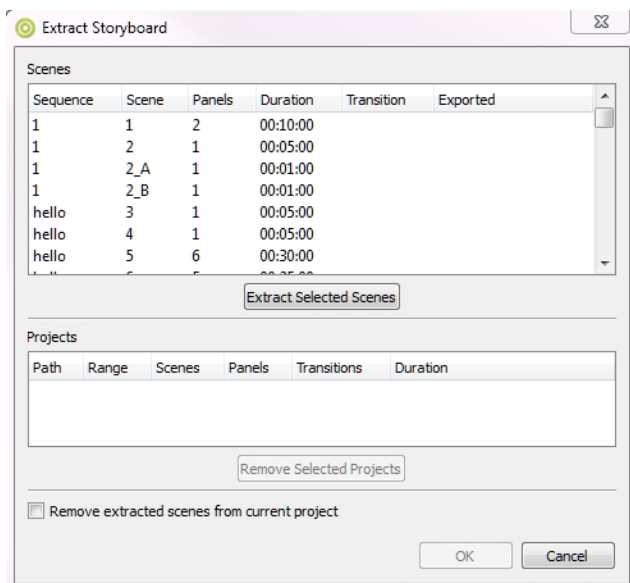
   The Extract Storyboard window opens.

2. From the Scenes section, select a scene or press [Shift]+click to include more than one scene.

> **NOTE:** The number of panels in a scene is indicated under the Panels heading. These panels cannot be divided, and you cannot split a scene.

3. Click **Extract Selected Shots**.

   A browser window opens.

4. Choose a name and location for this new project file and click **Save**.

   The project name and location appears under the Path heading in the Projects section.

5. To delete an extracted project, select it from the Projects section, and click **Remove Selected Projects**.

6. Select the **Remove extracted scenes from current project** option. This option determines if you will have an intact copy of the entire storyboard.

Merging Your Project Storyboard

After dividing your storyboard project by splitting or extracting it, you may need to reassemble all the files into a single project file. Using the Merge function, you can bring several projects into one final Storyboard Proproject.

To merge different storyboard files into a single project:

1. Select **File > Project Management > Merge**.
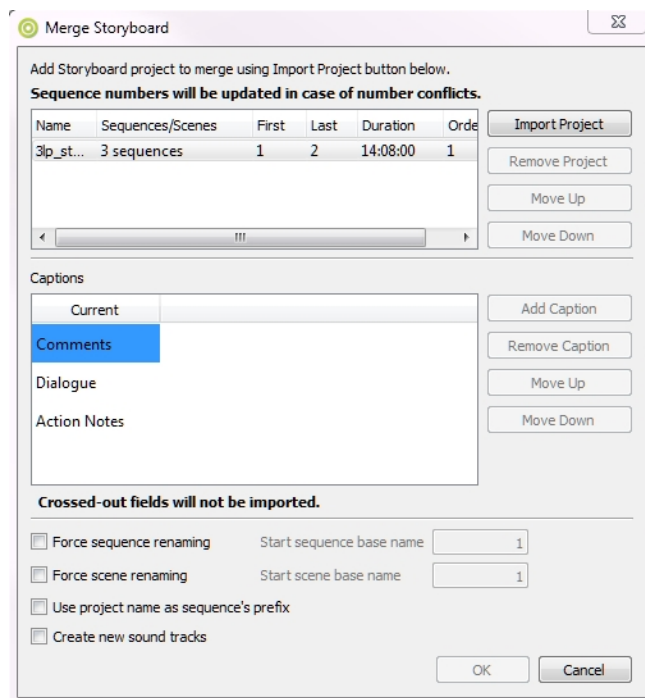
   The Merge Storyboard window opens.

2. Click **Import Project**.

3. In the browser window that opens, search for a Storyboard Pro project file that you want to merge with your current file and click **Open**.

The file name appears in the top section of the Merge Storyboard window.

4. Continue adding files in this way until you have all the files you need.

5. Use the Move Up and Move Down buttons to reorganize the files into the order in which you want them to be imported in relation to your current file.

6. Select any unwanted project file names and click **Remove Project** to delete them from the list.

7. In the Captions section, select a caption from under one of the project name headings and click Remove Caption to keep them from being imported into the merged file.

   Removal will be indicated by highlighting that caption in grey. If you change your mind about removing a caption, select that caption and click **Add Caption** to reinstate it.

8. If you created new caption fields in your current project, the captions associated with certain panels in the project files that you intend to import and merge will not correspond. You may also have new dialogue or notes that you would like to insert into the proper fields, but would like to keep the old information just to be safe.

   ‣ Use the Move Up and Move Down buttons to move the caption text around. If you move a caption from a certain project to a blank row, a new field will be created for this text in the project's panel window.

9. By default, scene numbers will be updated to avoid number conflicts, however, you can force the scene's numbering by selecting the **Force scenes numbering** option. If you do this, you must enter a number in the Start scene number field. This number will be assigned to the first scene in import project list section above.

10. Select the **Use project name as scene's prefix** option if you want the imported project's name to remain on all its scenes in the new merged file. The scene's new name will be its number in the merged file, prefixed by the file it originated from.

11. Select the **Create new soundtracks** option if you want to have the sound element from each imported project appear in a separate soundtrack (row) in the Timeline. Otherwise, all the sound elements will appear in the same soundtrack in the new merged project.

NOTE: This option is only available if you do not select the Force scenes numbering option.

Inserting Scenes

After splitting your storyboard project, you may need to reintegrate the scenes from a separate project file. You can do this by using the Insert option.

To insert the scenes from a different project file into your current project:

1. In your current project, in the Timeline view, move the red playhead to the point at which you want to insert the new scenes, or simply click a scene to select the insertion point.

2. From the top menu, select **File > Project Management > Insert**.

   The Open Storyboard Project window appears.

3. Search for the ***.sboard** file you are looking for and click **Open**.

   All scenes from the selected project file appear after the red playhead in the Timeline.

Merging and Replacing Scenes

Once the various parts of your project are complete and you are ready to bring it all back into your master project, you can easily merge and replace the changed scenes. In order to merge and replace scenes, you must keep a copy of your master project intact.

What is the difference between merging and merging/replacing? When merging a project, two projects are combined into one; each project appears sequentially in the Thumbnails and Timeline views. A merge and replace integrates scene changes back into the master project; any scenes that were changed are replaced with the new one. As an option, you can keep a copy of the original files for verification purposes.

> **NOTE:** When merging projects, the sounds in the master project will now move in order to sync with the panels.The sounds will follow panels based on their name, therefore, it is important to lock scenes and panels names prior to distributing the different scene's extracts, in order to preserve them.

To merge and replace scenes:

1. Open your master project.

2. From the top menu, select **File > Project Management > Merge and Replace**.

3. In the Advanced Merge Storyboard dialog box that opens, click **Import Project** and locate the **.sboard** file you want to bring in.
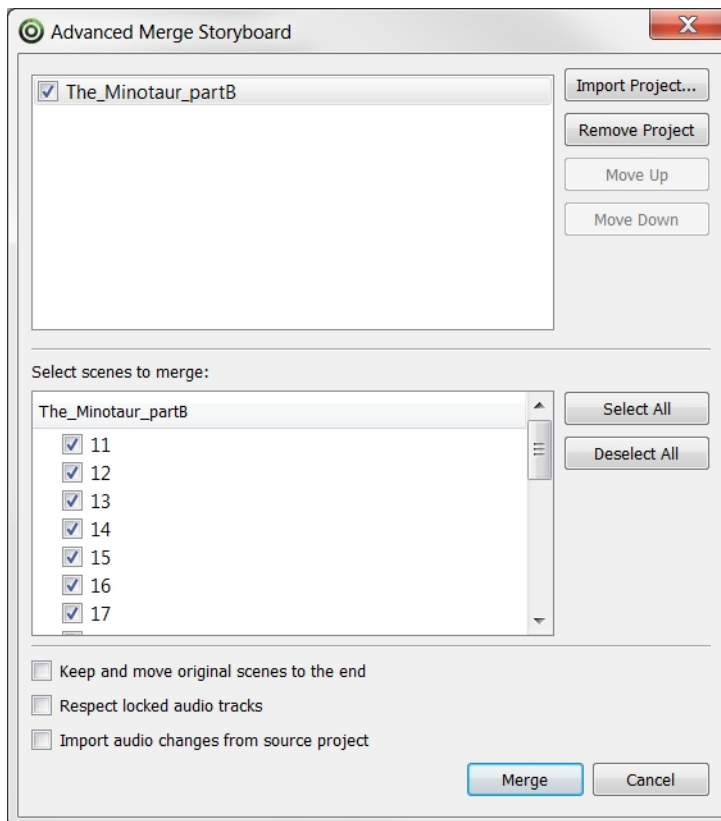
4. In the top pane, select the project you want to merge/replace.

5. Use the Move Up and Move Down buttons to organize the projects.

6. In the Select Scenes to Merge section, select the individual scenes to merge/replace.

7. Select the **Keep and move original scenes to the end** option to retain a copy of the original scenes, which are placed at the end of the master project. The name of the copy is prefixed sequentially by "1_orig" followed by the original scene name.

8. Select the **Respect locked audio tracks** option to ensure that the locked audio tracks will not be synced during the merge and replace. When deselected, audio tracks will be synched regardless if they were locked or not.

9. Select the **Import audio changes from source project** to allow the modifications done in the audio to be applied to the scenes that are replaced.

Chapter 13: Exporting Your Storyboard

Now that you have finished your storyboard or animatic, it is time to export it as images, PDF, or a movie file. Depending on whether or not you plan to edit your movie in a third party software or export snapshots, Storyboard Pro supports several export formats.

This chapter includes the following topics:

Exporting to PDF

You can export your storyboard project as a PDF file which you can later print or share electronically. This is where you will find the way to set up your visuals to represent a classic storyboard on paper. An extensive number of options, settings and customizing is possible while exporting to PDF.

This section includes the following topics:

Setting Up a PDF Export

To create a PDF:

1. Select **File > Export > PDF**.
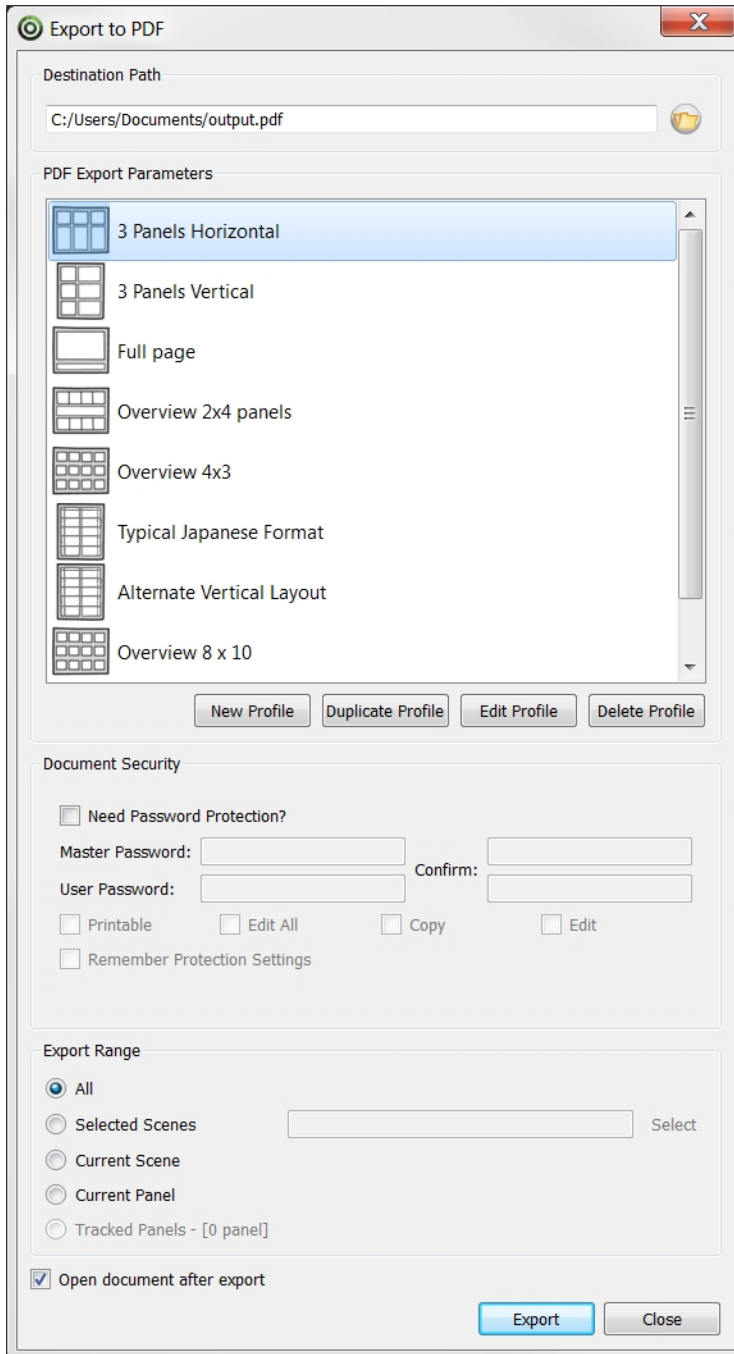
   The Export to PDF dialog box opens.

2. In the Destination Path field, specify the location and name of the file that will contain the PDF.

3. In the PDF Export Parameters section, select a layout for the PDF file.

▸ **3 Panels Horizontal**: This is a classic layout of a printed storyboard. It consists of three panels per page, including captions, in an horizontal arrangement.

▸ **3 Panels Vertical**: This is a classic layout of a printed storyboard. It consists of three panels per page, including captions, in a vertical arrangement.

▸ **Full Page**: This layout consists of one large panel per page, including captions.

▸ **Overview 2X4 Panels**: This layout consists of a total of eight panels per page, organized on two rows of four, with captions in the middle.

▸ **Overview 4X3**: This layout consists of a total of 12 panels per page, organized in three rows of four. No caption is included.

▸ **Typical Japanese Format**: This layout consists of a total of five panels by page, aligned on the left side of the page. Captions and duration are aligned in two consecutive rows on the right side. Note that your PDF reader and system may require an additional font package in order to display the PDF file properly.

▸ **Alternate Vertical Layout**: This layout consists of a total of 5 panels per page, aligned on the left side of the page. Captions are organized on the right size of each panel. This export also includes a cut and a duration column, and displays the duration of each scene at the beginning of every new one.

▸ **Overview 8x10**: This layout consists of a total of 80 panels per page, organized in ten rows of four. No caption is included.

4. To enable the security, see *Adding Security to Your PDF* on page 442.

5. In the Export Range section, select whether to generate a file including the entire storyboard, specific shots, or the currently selected panel(s).

   ▸ **All**: Exports your entire storyboard.

   ▸ **Selected Scenes**: Enable this option and click **Select** to open the Scenes Picker dialog box, in which you can select specific scenes to export. In the Scene Picker dialog box, you will be able to select your scenes per sequences if your project contains sequences.

   ▸ **Current Scene**: Exports only the currently selected scene.

   ▸ **Current Panel**: Exports only the currently selected panel.

   ▸ **Tracked Panels:** Exports panels that are marked as tracked. The number of tracked panels will appear beside the option—see *Tracking Changes* on page 427.

6. To view the file when it is ready, select the **Open document after export** option.

Adding Security to Your PDF

You can also secure your digital storyboard by giving your PDF file a password and restricting certain features such as printing and editing. When files have restricted features, any tools and menu items related to those features are dimmed.

To protect your PDF:

1. Select **File > Export > PDF**.

   The Export to PDF dialog box opens.

2. Set up your PDF export options—see *Exporting to PDF* on page 439.

3. In the Document Security section, set up the protection:

▸ Select the **Need Password Protection** option to add password protection to your PDF file.

▸ In the **Master Password** field, type an administrator password. The owners of this password will not be bound by the protection.

• Enter the **Master Password** in the top **Confirm** field. Note that the password must be at least 6 characters long.

▸ In the **User Password** field, type a user password. The owners of this password will be bound to the protection options you have defined. Enter the user password in the bottom **Confirm** field. Note that the password must be at least 6 characters long.

▸ Define the permissions you want to give to users:

  • **Printable**: Gives the user permission to print the storyboard.

  • **Edit All**: Gives users the following PDF permissions:

    ▸ Changing the Document

    ▸ Document Assembly

    ▸ Filling of Form Fields

    ▸ Signing

    ▸ Creation of Template Pages

  • **Copy**: Gives users the following PDF permissions:

    ▸ Content Copying

    ▸ Content Copying for Accessibility

  • **Edit**: Gives users the following PDF permissions:

    ▸ Commenting

    ▸ Filling of Form Fields

    ▸ Signing

▸ Select the **Remember Protection Settings** option to keep these settings as default.

Creating a Custom Layout

When exporting your storyboard project to a PDF file, five default page layouts are available. You can also define your own preferences and set up a personalized layout using extensive options.

To create a custom layout:

1. From the top menu, select **File > Export > PDF**.

   The Export to PDF dialog box opens.

2. In the PDF Export Parameters section, click one of the following buttons:

   ▸ **New Profile**: Creates a completely new layout.

‣ **Edit Profile**: Lets you edit the selected layout from the list.

‣ **Duplicate Profile**: Makes a copy of the selected layout from the list.

‣ **Delete Profile**: Deletes the selected layout from the list.

3. In the General tab, do the following:
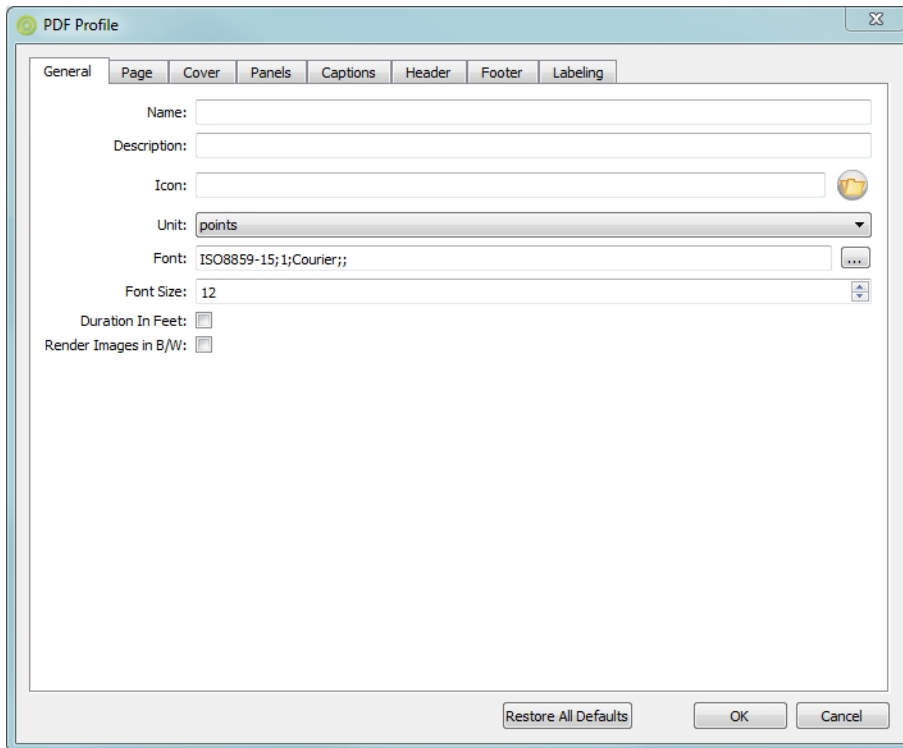
‣ **Name**: Type in a name for your custom layout. If you choose **Edit Profile**, you already have the selected profile name displayed in this field, you can rename it if you need to.

‣ **Description**: Enter a short description of the layout in this field.

‣ **Icon**: Select an image file representing the custom layout you are creating, to be displayed in the profile list. For best results, your image should be 45x45 pixels.

‣ **Units**: Select the unit of measurement (points, mm, cm or inches) used in the Page Layout dialog box.

‣ **Font**: Select any font installed on your system to use for all text in the PDF document.

> To export Unicode characters to your PDF document, click the **[...]** button to select the language encoding and the embedded PDF font that will be used to display the text in the PDF document.
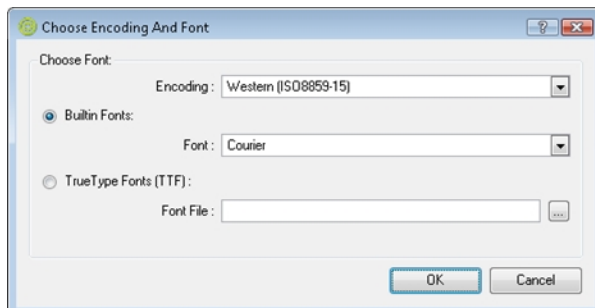
‣ **Font Size**: Define the size of the font.

‣ **Duration in Feet**: Select this option if you want the duration value to be expressed in feet.

‣ **Render Images in B/W**: Select this option if you want your PDF in black and white instead of colours.

4. In the Page tab, do the following:
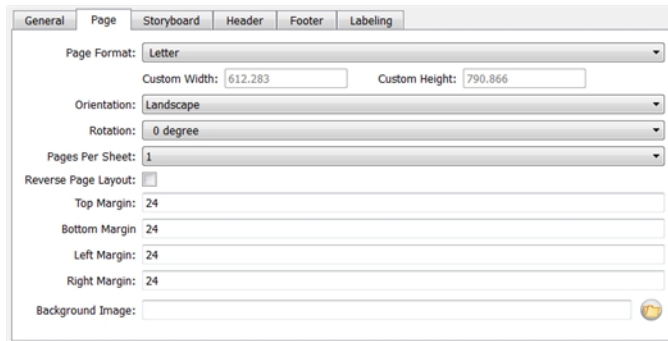
▸ **Page Format**: Select the type of page you want to print on:

- • **11X17**
- • **A3**
- • **A4**
- • **Legal**
- • **Letter**
- • **Custom:** Define a custom size for the PDF export.

▸ **Custom Width**: Type in the desired width value for the PDF file. This option becomes available once the option Custom is selected from the Page Format menu.

▸ **Custom Height**: Type in the desired height value for your PDF file. This option becomes available once the option Custom is selected from the Page Format menu.

▸ **Orientation**: Select if you want the PDF page to be printed in portrait or landscape.

▸ **Rotation**: Select the degree of clockwise rotation of the storyboard on the printed page.

▸ **Pages Per Sheet**: Select the number of storyboard pages you want to be printed on each sheet.

▸ **Reverse Page Layout**: Select this option to reverse the position of the captions in relation to the panels.

▸ **Top Margin field**: Enter distance from the top page edge to set the margin.

▸ **Bottom Margin field**: Enter distance from the bottom page edge to set the margin.

▸ **Left Margin field**: Enter distance from the left page edge to set the margin.

▸ **Right Margin field**: Enter distance from the right page edge to set the margin.

▸ **Background Image**: Select an image to use as a watermark on all pages, except the cover.

5. In the Cover tab, do the following:

▸ **Show Cover**: Insert a cover as the first page of the PDF.

▸ **Background Image**: Select an image (PNG, BMP or JPG file format) to use as a watermark on the cover.

▸ **Show Title**: Display the project title defined in the storyboard properties.

▸ **Show Subtitle**: Display the project subtitle defined in the storyboard properties.

▸ **Show Duration**: Display the duration (as a time code or frame) of the selected storyboard panels.

▸ **Show Date**: Display the date of export.

▸ **Include Note**: Include a revision note on the cover page. When you click **Export**, a dialog box opens in which you can type the desired revision indications.
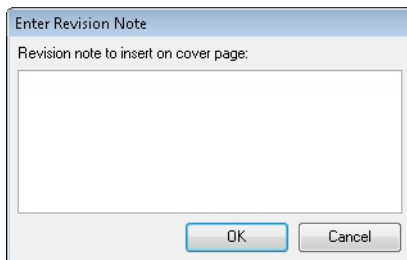
6. In the Panels tab, do the following:
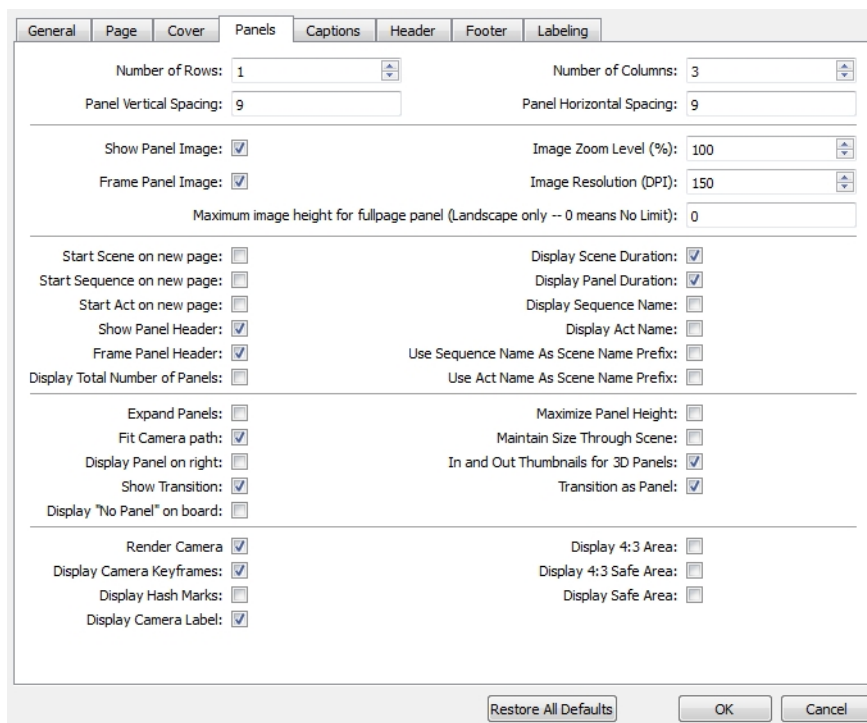
‣ **Number of Rows**: Defines the number of panel rows displayed per page.

‣ **Number of Columns**: Defines the number of panel columns displayed per page.

‣ **Panel Vertical Spacing**: Defines the vertical spacing between panels.

‣ **Panel Horizontal Spacing**: Defines the horizontal spacing between panels.

‣ **Show Panel Image**: Displays each panel's visual content.

‣ **Image Zoom Level (%)**: Displays the image in the panel at a percentage of the original size.

‣ **Frame Panel Image**: Displays a rectangle around the panel's visual content on each page.

‣ **Image Resolution (DPI)**: Defines the DPI value of the exported images in the PDF storyboard. The default value is 150. A higher value increases the sharpness of the images, as well as the final file size of your PDF.

‣ **Maximum image height for fullpage panel (Landscape only. --0 means No Limit)**: Defines the maximum height a panel can have when it is full page.

‣ **Start Scene on new page**: Makes each new scene start on a new page.

‣ **Display Scene Duration**: Displays the duration of each scene.

‣ **Start Sequence on new page**: Makes each new sequence start on a new page.

‣ **Display Panel Duration**: Displays the duration of each panel.

‣ **Start Act on new page**: Makes each new act start on a new page.

‣ **Display Sequence Name**: Displays the sequence name.

‣ **Show Panel Header**: Displays each panel's shot name, panel number, and duration as a header.

‣ **Display Act Name**: Displays the act name.

‣ **Frame Panel Header**: Displays a rectangle around the panel header on each page.

‣ **Use Sequence Name as Scene Name Prefix**: Displays the sequence name as part of the scenes' names.

- ‣ **Display Total Number of Panels**: Displays the total number of panels in the scene in the panel header.
- ‣ **Use Act Name as Scene Name Prefix**: Displays the act name as part of the scenes' names—see *What are the Differences between Sequences, Scenes, Panels and Acts?* on page 113
- ‣ **Expand Panels**: Displays camera motion (such as pan, tilt, or zoom) in the image across several panels.
- ‣ **Maximize Panel Height**: Displays the panel at the maximum of its height.
- ‣ **Fit Camera Path**: Ensures the camera movement is included in a single panel space.
- ‣ **Maintain Size Through Scene**: Keeps every panel of your printed storyboard the same size.
- ‣ **Display Panel on right**: When using the Vertical profile, displays images on the right side of the page instead of the left.
- ‣ **In and Out Thumbnails for 3D Panels**: Renders an In thumbnail and an Out thumbnail for the 3D panel, as if the user would have added a snapshot at both ends of the panel.
- ‣ **Show Transition**: Displays transition information (Transition type and duration).
- ‣ **Transition as Panel**: Displays a transition as a panel.
- ‣ **Display "No Panel" on board**: Replaces the panel's image with an X and the text "No Panel" above it. This is used when there is not enough space to display a panel on the same page. The panel with the image is normally displayed on the next page or the nearest one with enough space to show the image on.
- ‣ **Render Camera**: Displays the camera frame and camera path on the PDF export. Disable the option to hide them.
- ‣ **Display 4:3 Area**: Prints the 4:3 area on each panel of your storyboard which has a camera movement— see *4:3 Area* on page 57.
- ‣ **Display Cameras Keyframes**: Prints the different camera keyframes on the exported images. The actual camera keyframes on each panel are rendered instead of just the in and out frames.
- ‣ **Display 4:3 Safe Area**: Prints the 4:3 safe area on each panel of your storyboard which has a camera movement. To learn more about the 4:3 safe area—see *4:3 Area* on page 57.
- ‣ **Display Hash Marks**: Displays the hash marks, small triangles in the bottom of the camera frames which indicate the ratio of the camera.
- ‣ **Display Safe Area**: Prints the safe area on each panel of your storyboard that has a camera movement. To learn more about the safe area and how you can define its limit—see *Safe Area* on page 57.
- ‣ **Display Camera Label**: Prints the In and Out camera labels of your camera moves to your storyboard.

7. In the Captions tab, do the following:
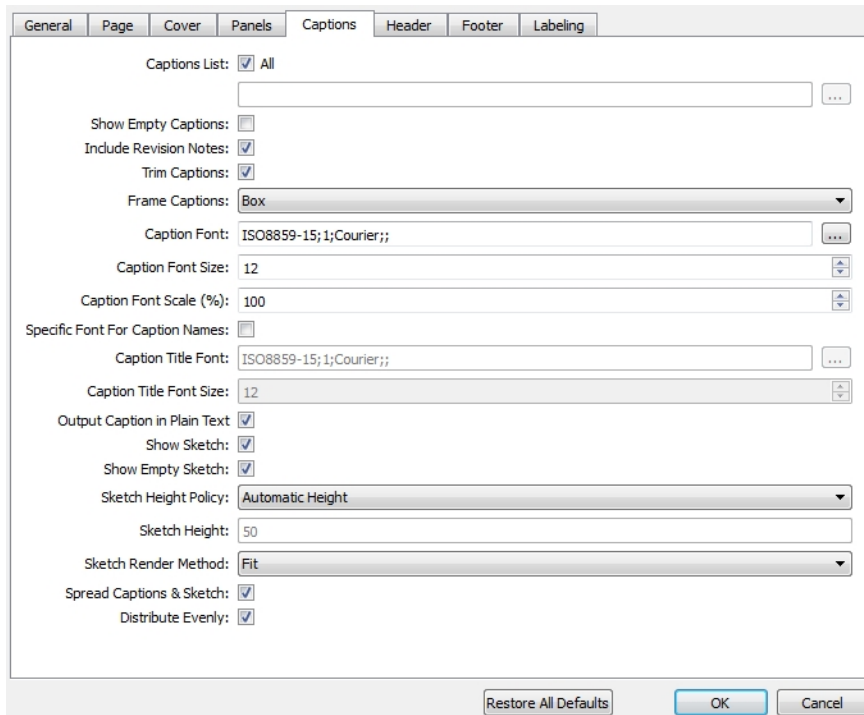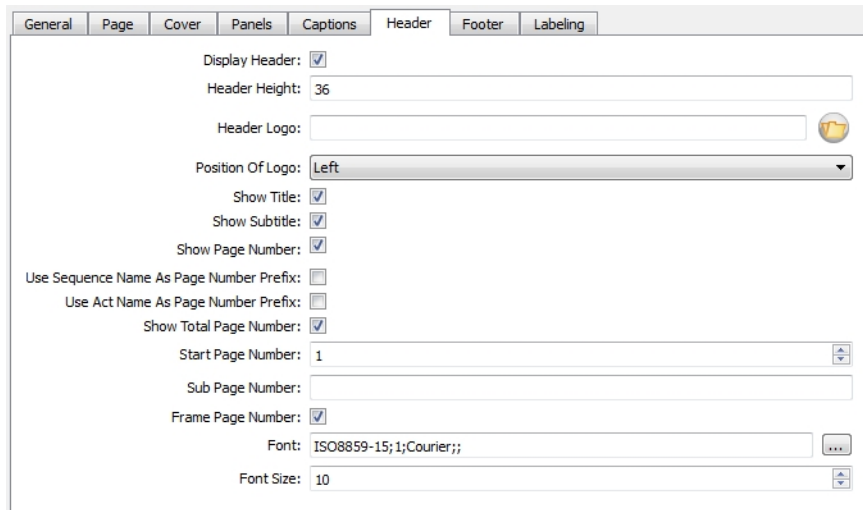
▸ **Captions List All**: Includes every caption in the PDF.

• Disable this option to activate the browsing button. Click this button to display the List Picker, which is a list of all your captions and select the ones you want to export.
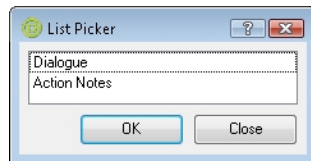
▸ **Show Empty Captions**: Includes the empty captions of your project in the PDF.

▸ **Include Revision Notes**: Adds revision notes as a new caption.

▸ **Trim Captions**: Removes empty lines after captions.

▸ **Frame Captions**: By default the option will be set to **Box**. There are two other choices.

• **Box**: Displays a black rectangle around captions on each page.

• **Line Above**: Displays a line above each caption.

• **No Frame**: No frames will be displayed around captions.

▸ **Caption Font**: Browse to the font you want to use for the captions.

▸ **Caption Font Size**: Sets the size of the font you are using for the captions.

▸ **Caption Font Scale**: Determines the scale factor used when converting a font to a PDF font (screen resolution versus print resolution).

▸ **Specific Font For Caption Names**: Enables the Caption Title Font and Caption Title Font Size options.

- **Caption Title Font**: Browse to the font you want to use for the caption title.
- **Caption Title Font Size**: Sets the size of the font you are using for the caption title.

‣ **Output Caption in Plain Text**: Ignores text formatting, such as bold, italics, that may be in the caption fields in the interface.

‣ **Show Sketch**: Prints the Sketch captions to your storyboard.

‣ **Show Empty Sketch**: Prints the Sketch captions even if they are empty.

‣ **Sketch Height Policy**: Sets the height rule for the Sketch captions:

- **Automatic Height**: Lets the application automatically define the height of each Sketch panel depending on the available space in the current layout.
- **Evenly Distributed**: Keeps the same size of sketch boxes throughout the storyboard. Otherwise, the caption boxes are set to fit the content of each sketch independently.
- **Fixed Height**: Keeps the same height throughout the storyboard.
- **Max Height**: Enables the Sketch Height field in which you can define the maximum height you want your Sketch caption to follow.

‣ **Sketch Height**: Defines the maximum height a Sketch caption can be. Set the Select Max Height in the Sketch Height Policy to make this option available.

‣ **Sketch Render Method**: Sets the rule of how your sketch will appear in the Sketch caption.

- **Crop**: The sketch will keep its original aspect and be cropped if it does not fit the current Sketch caption size.
- **Fit**: The height of the sketch will fit the height of the caption, any exceeding part on the width may be cropped.
- **Stretch**: The sketch will be resized to fit inside the caption field and will not be cropped.

‣ **Spread Captions and Sketch**: Adapts the box to the text or sketch and spreads it across the next panel if necessary. When this option is deselected, the caption text or a sketch that is too long or big for the space available in the box will be cut.

‣ **Distribute Evenly**: Keeps the same size of caption boxes throughout the storyboard. When this option is deselected, the caption boxes are set to fit the content.

8. In the Header tab, do the following:

▸ **Display Header**: Displays a header on each page (except the cover). The header includes the project title, project subtitle, and project episode defined in the storyboard properties.

▸ **Header Height**: Enter the size of the header displayed on each page (except the cover).

▸ **Header Logo**: Browse to a logo image (BMP, JPG, or PNG) to display on the header. Scale the logo to match header's height.

▸ **Position of Logo**: Sets the position of your logo in the header:

▸ **Show Title**: Displays the project title defined in the storyboard properties.

▸ **Show Subtitle**: Displays the project subtitle defined in the storyboard properties.

▸ **Show Page Number**: Displays a page number in the header on each page (except the cover).

▸ **Use Sequence Name as Page Number Prefix**: Displays the sequence name as part of the page number.

▸ **Use Act Name as Page Number Prefix**: Displays the act name as part of the page number.

▸ **Show Total Page Number**: Shows the current page number, as well as the total number of pages of the storyboard (3/7)

▸ **Start Page Number**: Defines the first number to start the page numbering.

▸ **Sub Page Number**: By default, the pages are numbered 1, 2, 3, 4, etc... You can define a sub page number in this field. For example, if you set a subpage number "1", the pages will be named 11, 12, 13, 14, and so on. If you set a subpage "_a", the pages will be named 1_a, 2_b, 3_c, 4_d, and so on.

▸ **Frame Page Number**: Displays a rectangle around the page number in the header on each page.

▸ **Font**: Lets you browse to the font you want to use for the text in the header.

▸ **Font Size**: Sets the size of the font you are using for the text in the header.

9. In the Footer tab, do the following:
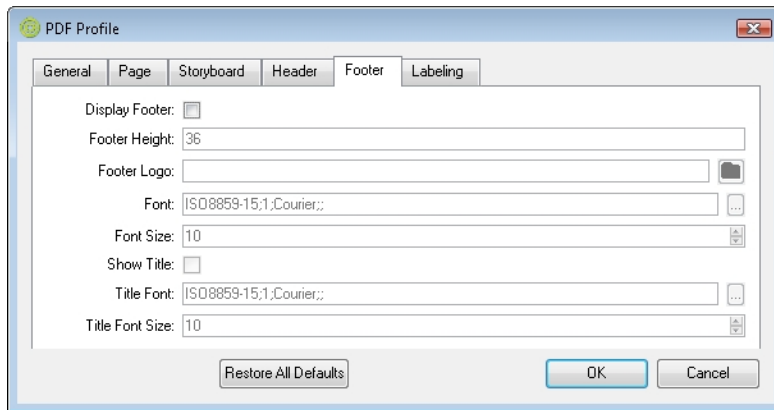
▸ **Display Footer**: Displays a footer on each page (except cover). The footer includes the project copyright, defined in the storyboard properties. When you select this option, all of the following options become available:

- **Footer Height**: Enter the size of the footer displayed on each page (except cover).
- **Footer Logo**: Browse to an image file to insert as a logo in the footer.
- **Font**: Browse to the font you want to use for the text in the footer.
- **Font Size**: Set the size of the font you are using for the text in the footer.
- **Show Title**: Enable this option to display the storyboard title in the footer.
- **Title Font**: Browse to the font you want to use for the title in the footer.
- **Title Font Size**: Set the size of the font you are using for the title in the footer.

10. In the Labeling tab:
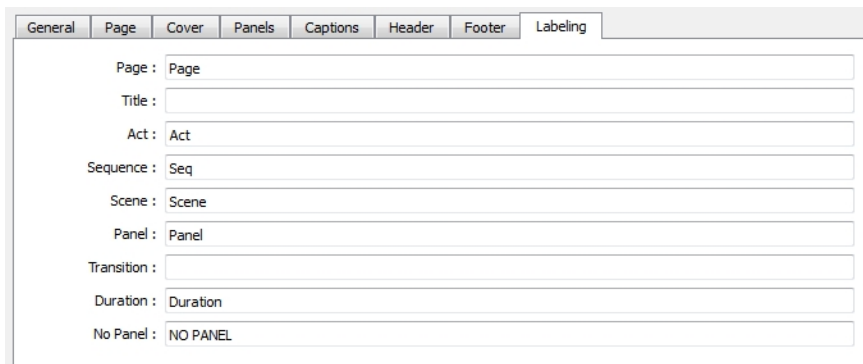
▸ Use the different fields of the Labeling tab to specify how the listed labels should appear in the PDF.

- Page
- Title
- Act
- Sequence
- Scene
- Panel
- Transition
- Duration
- No Panel

11. Once you are done, click OK to confirm your layout setup. The new profile you created will be available in the Profile list or the profile you edited will be saved as such in the Profile list.

‣ Click **Cancel** to cancel your setup and close the window without applying the changes to the selected profile or creating your new profile.

‣ Click **Restore All Defaults** to restore all the options and fields to the default values.

PDF Options Panel

You can set up the PDF export settings for a selected panel. This panel will be exported with all the others, but will follow its own rules.

To specify independent PDF options for selected panels:

1. Display the Panel PDF Options view by doing one of the following:

‣ In the Workspace toolbar, click the PDF View 🔲 button to switch to the PDF View workspace.

‣ You can also select **Windows > Panel PDF Options** to display the view in your current workspace.

2. In the Thumbnails view, select one or more panels.

3. In the Panel PDF Options view, set the export options to apply to the selected panels:
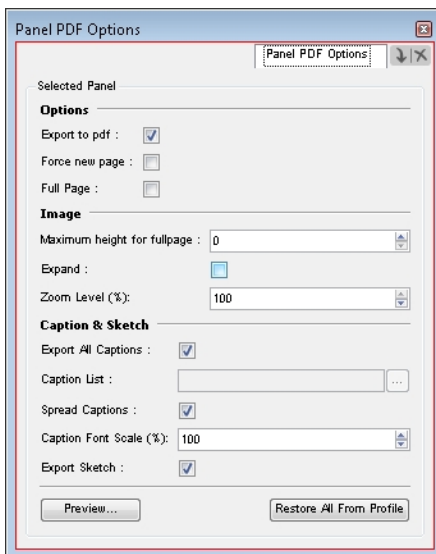
‣ **Options**:

  • **Export to pdf**: This option is enabled by default. You can disable it if you want this particular panel not to be exported.

  • **Force new page**: Forces force this panel to start a new page.

  • **Full Page**: Prints panel on a full page.

‣ **Image**:

  • **Maximum height for full page**: The maximum height the panel will be when it is full page.

  • **Expand**: Displays camera motion (such as pan, tilt, or zoom) in the image across several panels.

  • **Zoom Level (%)**: Size, in percentage, that the panel will appear within its frame.

‣ **Caption & Sketch**:

- **Export All Captions**: This option is enabled by default. Every caption from this panel will be exported to pdf. Deselect this option to enable the Caption List option to select specific captions you want to export.

- **Caption List**: This option is unavailable when Export All Captions option is enabled. When available, click the button to open the List Picker, in which you can select only the captions you want to export.
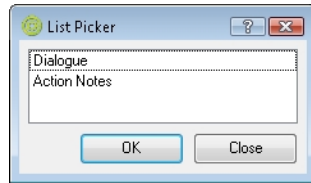
- **Spread captions**: When this option is disabled, if a caption text is too long or big for the space available in the box, it will be cut. Enable this option to adapt the box to the text and spread it across the next panel if necessary.

- **Caption Font Scale (%)**: Select at which scale, in percentage, the text will appear in the captions of this panel.

- **Export Sketch**: Exports the sketch caption field of this panel.

4. Click **Preview** to create a quick pdf preview of the page containing the selected panel(s), using the current default pdf export profile for the other panels.

5. Click **Restore All from Profile** to reset the options to the current default pdf export profile.

Analyse and Export to PDF

Using the PDF Export view, you can set up your pdf export and run an analysis on the result before printing it to a PDF file. This can prove useful to prevent overset text that could result from the selected profile and pdf layout options.

To analyse and export to PDF:

1. Display the PDF Export view by doing one of the following:

‣ In the Workspace toolbar, click the PDF View ⊞ button to switch to the PDF View workspace.

‣ You can also select **Windows > Panel PDF Options** to display the view in your current workspace.

2. In the PDF Export view, do the following:
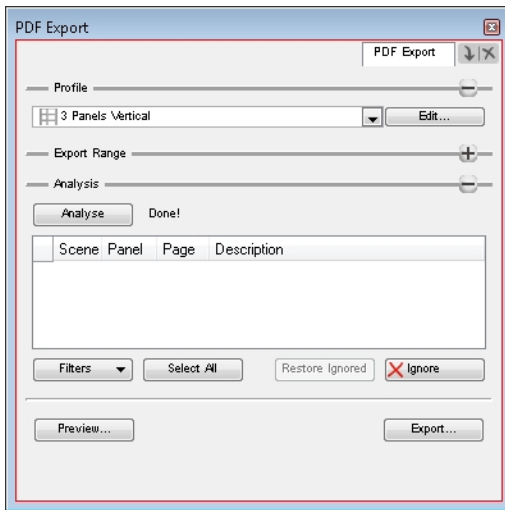
▸ In the Profile section, use the drop-down menu to select the profile you want to use for your export. Once a profile is selected, click **Edit** to modify the current options of the layout—see *Creating a Custom Layout on page 443* section to learn how to use the settings of the PDF Profile dialog box.

3. Click the Expand ⊕ button to display the Export Range section:

▸ By default, the export range is set to All, which means your entire storyboard project will be exported.

▸ **Selected Scenes**: Enable this option and click the Select button to open the Scenes Picker dialog box, in which you can select specific scenes to export.

▸ **Current Scene**: Exports only the currently selected scene to PDF.

▸ **Current Panel**: Exports only the selected panels to PDF.

▸ **Tracked Panels**: Exports export panels that are marked as tracked. The number of tracked panels will appear beside the option—see *Tracking Changes on page 427*.

4. In the Analysis section:

▸ Use the Filters menu to select the issue types you want the analysis process to look for including: Text Overflow, Text Overlap, and Camera Pan issues.
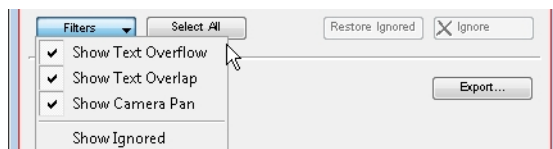
▸ Click **Analyse** to start the analysis of your PDF options.

- If no issue is encountered, the list will remain empty and the word `Done!` will appear beside the Analyse button.
- If issues are encountered, they will appear in the list area. The scene, panel, and page numbers will be indicated, as well as a description of the problem found.
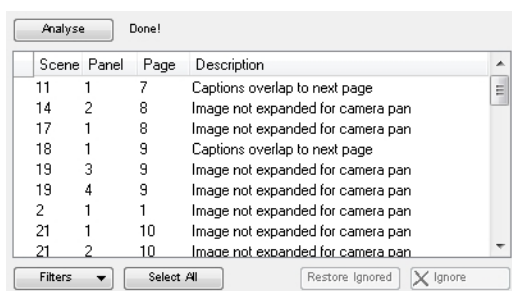
▸ If issues were found, you can select them and click **Ignore** to remove them from the list as you verify the critical level these elements have on your PDF export.

- In the Filters menu, you can choose to show ignored issues by enabling the **Show Ignored** option. Instaed of being removed from the list, the will appear with a red mark.
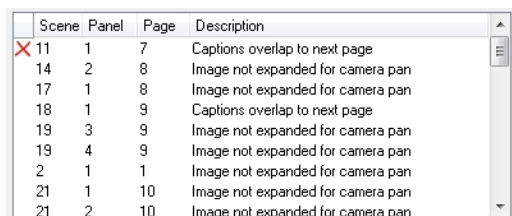
▸ When the Show Ignored filter is enabled, you can select an ignored issue, and reset it as not ignored by clicking **Restore Ignored** to remove the red mark.

5. Click **Preview** to generate a PDF preview of the selected issue.

6. Once you are ready, click **Export** to export your PDF file.

   The Export to PDF dialog box opens.

   ▸ In the Destination Path field, specify the location and name of the file that will contain the PDF. Either type in the path directly or click the **Browse** button to display a window to select a file. Refer to the *Adding Security to Your PDF* on page 442 section to learn how to set up password protected security rules.

   ▸ Select the **Open document after export** option to automatically open your PDF file when it is ready.

Adding Snapshot Markers to a Panel

By default, only the first frame of each panel is visible in the PDF file you export. Sometimes, you may need to display a specific frame or several frames from a panel. For example, on a panel that has a layer or camera movement. If you want to specify which frames in a panel will be visible in a PDF file, you must add snapshot markers to the panels.

The adding of snapshots is especially useful when you make changes to the camera position in 3D space. If the camera is not taking a shot that is representative of your scene at the beginning of the panel, you can select the keyframe of the panel that has the camera in the right position before you take the snapshot. For more information on viewing what the camera is capturing, see *Previewing the Panel with the Camera View* on page 372.

Refer to the *Animatic* on page 331 chapter to learn more about layer and camera moves.

To add a snapshot marker to a panel:

1. In the Timeline view, select the panel to which you want to add a snapshot marker.

2. Drag the red playhead to the exact position where you want to add the snapshot.
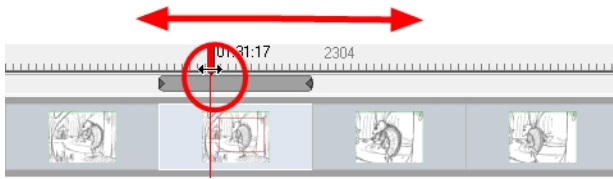
3. After you position the playhead, do one of the following:

   ‣ From the top menu, select **Storyboard > Add Snapshot**.
   ‣ Right-click the panel and select **Add Snapshot**.

   The Snapshot marker, a blue arrow, appears in the Timeline view.
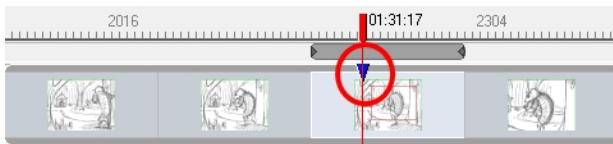
4. Repeat the previous steps for each snapshot marker you want to add to the panel.

   ‣ Once you add snapshot markers to your panel, you can reposition them by dragging them along the Timeline.
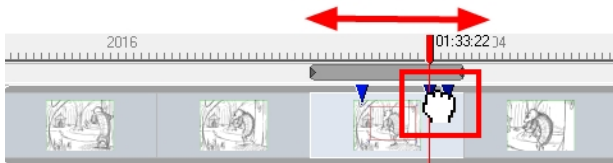
Deleting Snapshot Markers from a Panel

You can remove snapshot markers from the currently selected panel.

To delete a snapshot marker:

1. Select the snapshot marker you want to delete.

    A hand cursor appears over the snapshot marker.
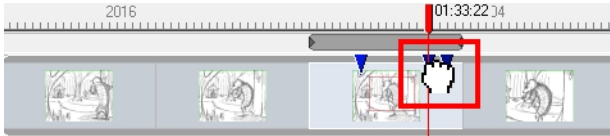
2. Drag the hand cursor outside of the panel in the Timeline view to remove the snapshot marker.

Export to CSV

You can export the data in a storyboard project in comma separated value (*.csv) file format. You can view this data in any application that supports comma separated value files, such as Microsoft Excel. If you do not have Microsoft Excel installed, you can save the *.csv file to your computer, and then open the file in another application.

To export a storyboard to a CSV file:

1. Select **File > Export > CSV**.

    The Export to CSV dialog box opens.
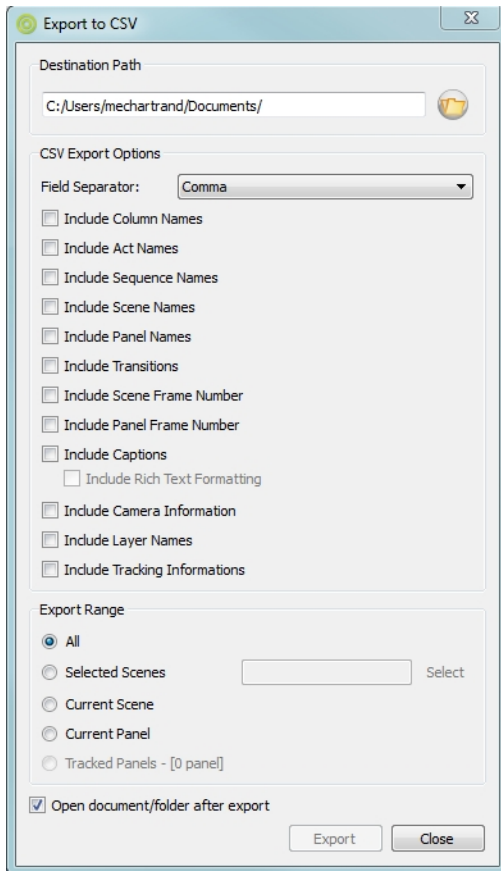
2. In the Destination Path field, specify the location and name of the folder for the storyboard project's data.

3. In the CSV Export Options panel:

    ▸   Use the Field Separator menu to select the fields separator.

        •   Comma

        •   Semicolon

        •   Tab

        •   Vertical bar (Pipe)

    ▸   Set the options corresponding to the data you want to export.

NOTE: Refer to *Tracking Changes* on page 427 to learn about Tracking Information.

4. In the Export Range panel, select whether to export the entire storyboard, specific shots, or the last panel you selected. Either enter a space between shot names or click **Select** to display a window to browse scenes. In the Scene Picker dialog box, you can select your scenes by sequence if your project contains sequences.

5. To view the CSV file directly in Microsoft Excel or another application that recognizes the CSV format, select the **Launch reader/player after export** option.

Export Bitmap

You can easily export your storyboard and selected panel or frame to a TGA, JPEG, or PSD image file.

- *File Name Patterns When Exporting* on page 462

- *Exporting the Current Image* on page 462

- *Exporting Your Storyboard to Bitmap* on page 463

File Name Patterns When Exporting

It is possible to define sequential file name patterns when exporting to image sequence, bitmap, EDL and AAF (movie files).

For example: `%4s.%2p.%3f.%4F.tga`

> `%4s` => **shot name** on 4 chars (all export formats)
> `%2p` => **panel name** on 2 chars (all export formats)
> `%3f` => **frame** on 3 chars (Image Sequence and Bitmap)
> `%4F` => **global frame** on 4 chars (Image Sequence Only)

Where:

> `%` means it will be replaced by:

> `s` (shot name)
> `p` (panel number)
> `f` (local frame number in panel)
> `F` (global frame number in timeline)

The number in-between represents the minimum length to display it. If the text value is shorter than this length, it will be left-padded by 0 (zero).

For example:

If the frame number is 48, and the user specifies the following in file name:

> `%1f` = you will see "**48**" in file name.

> `%2f` = you will see "**48**" in file name.

> `%3f` = you will see "**048**" in file name.

> `%4f` = you will see "**0048**" in file name.

Exporting the Current Image

You can export the current visible frame to a TGA, JPEG, or PSD image. Note that a PSD file will keep each layer separated and named as in the panel.

> **NOTE:** No caption or camera frame will be exported in the image file.

To export the current frame to TGA, JPEG, or PSD image:

1. In the Thumbnails view, select the panel containing the image you want to export as a bitmap image file.
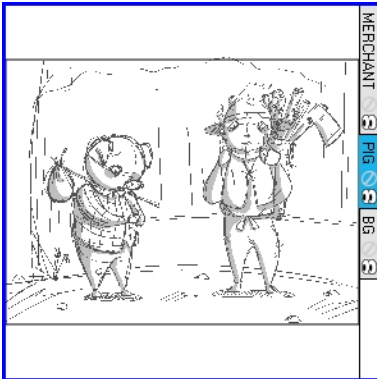
2. From the top menu, select **File > Export > Export Current Image**.

   The Save As dialog box opens.
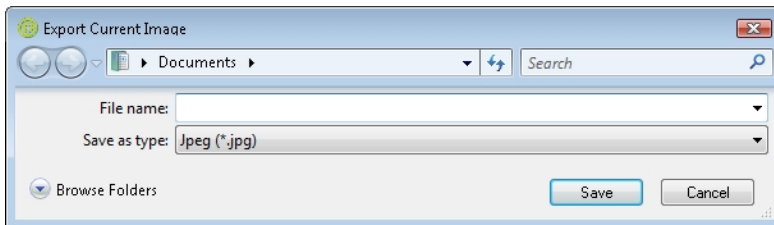
3. Browse and select the destination folder for your image.

4. Type a name for the image.

5. Select the desired type from the Save as type menu.

6. Click **Save** to confirm your settings and begin the export.

   The image inside the frame is exported as a bitmap image file.

Exporting Your Storyboard to Bitmap

You can export a storyboard project to bitmap files in PSD with independent layers, TGA, or JPG format. Your exported data includes a separate bitmap file for each panel in the storyboard.

NOTE: In the case of a PSD file, transform and transition animations are not exported. However, camera moves are rendered into an independent layer.

To export a storyboard to a bitmap file:

1. Select **File > Export > Bitmap**.

    The Export to Bitmap dialog box opens.
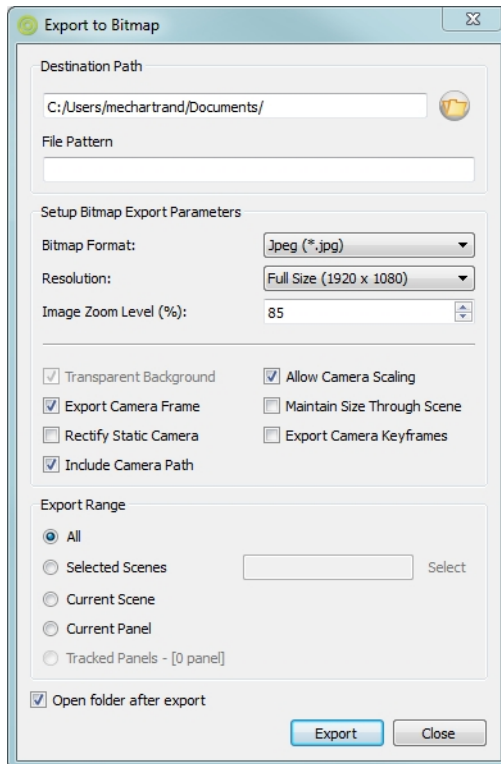
2. In the Destination Path panel:

    ‣ Specify the name and location of the folder that will contain the storyboard's assets.

    ‣ In the File Pattern field, enter a prefix for your image files names. If you leave this field blank, by default, the resulting bitmap files will be named `storyboardname-shotnamepanelnumber.psd/jpg/tga`. For example, a storyboard named `Three Little Pigs` containing a scene named `BrickHouse` with three panels will create three bitmap files named:

    - `Three Little Pigs-BrickHouse-1.psd/jpg/tga`
    - `Three Little Pigs-BrickHouse-2.psd/jpg/tga`
    - `Three Little Pigs-BrickHouse-3.psd/jpg/tga`

3. In the Setup Bitmap Export Parameters panel:

    ‣ In the Bitmap Format menu, indicate whether you want your bitmap files to be in PSD, JPG, or TGA format.

    ‣ **Resolution**: Sets the resolution to be a quarter size, half size, or full size of the current storyboard resolution.

    ‣ **Image Zoom Level**: Sets the magnification of the image. Enter a value between 0 and 400. The default value is 85%.

    ‣ **Transparent Background**: This option is only available when the Adobe Photoshop (`*.psd`) file format is selected. By default this option is enabled and will export your `*.psd` file.

    ‣ **Export Camera Frame**: Exports the camera frame black border in the image file.

‣ **Rectify Static Camera**: When this option is enabled, if there is a rotation in the camera, the camera frame will appear as straight and the image will be rotated instead. When disabled, the camera frame appears as rotated and the image is straight.

‣ **Include Camera Path**: Ensures that the camera paths and control points appear inside the image. When this option is disabled, they might appear cropped if they exceed the camera frames area.

‣ **Allow Camera Scaling**: This option is enabled by default. This ensures that when a very wide zoom camera movement is included in a panel, the image resulting from the export will be bigger in relation to the camera scaling used. If you disable this option, the exported image will not follow the camera scaling and export it to fit a normal camera frame.

‣ **Maintain Size Through Scene**: Ensures that all images exported are the same size. If this option is disabled, it is possible that some images export to a bigger size, for example if there is a traveling camera movement.

‣ **Export Camera Keyframes**: Prints each camera keyframe on your images.

4. In the Export Range panel, select whether to export the entire storyboard, specific scenes, the last panel you selected, or tracked panels. Either enter a space between scene names or click **Select** to display a window to select scenes. In the Scene Picker dialog box, you can select your scenes by sequence if your project contains sequences—see *Tracking Changes* on page 427.

5. To view the location and contents of the exported folder when it is ready, select the **Open folder after export** option.

Exporting a Movie

Once you have created your storyboard and animatic, you can export it as a movie file to share and play back easily for an efficient timing reference. You can export your movie file in three different formats: QuickTime, SWF Movie (Flash), and as image sequences.

This section includes the following topics:

- *Exporting a QuickTime Movie* on page 465
- *Exporting an SWF Movie (Flash)* on page 471
- *Exporting an Image Sequence* on page 475

Exporting a QuickTime Movie

To export a QuickTime Movie:

1. Select **File > Export > Movie**.

   The Export To Movie dialog box opens.
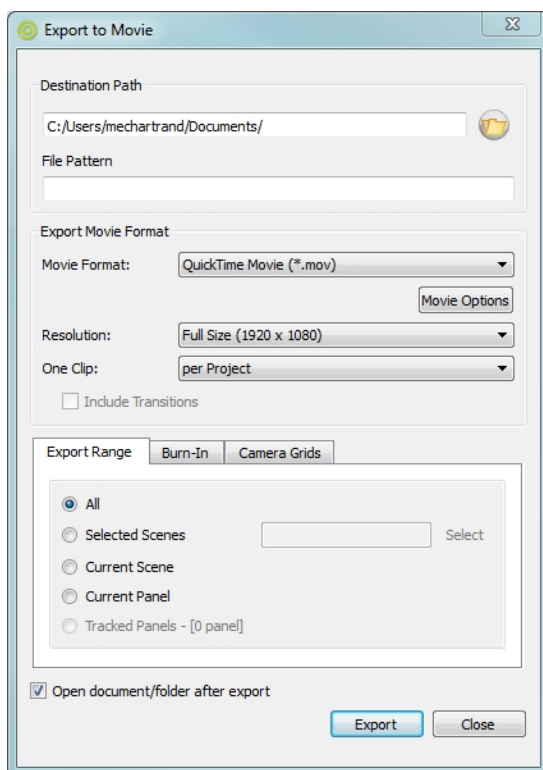
2. In the Destination Path, select a folder in which to save your movie. You can type in the exact path or use the Browse button to browse to a specific folder on your system.

3. From the Export Movie Format panel:

   ▸ From the Movie Format menu, select **QuickTime Movie (*.mov)**.

   ▸ From the Resolution menu, select the resolution: A quarter size, half size, or full size of the current storyboard resolution–see *Changing the Project Resolution Settings* on page 42.

   ▸ From the One Clip menu, select the **Per Scene** option if you want to create a single movie file for each scene. Once this option is activated, the Include Transitions option becomes available. Select this option if you want transitions to be included in your movie files. If you prefer to have one single clip for the entire project, select the **Per Project** option in the drop-down menu. When you add sequences to your projects, you can also select **Per Sequence** to create one clip per sequence.

4. Click **Movie Options** to modify some of the QuickTime movie settings.

NOTE: Refer to the *QuickTime Movie Settings* on page 468 section to learn more about these movie settings.

5. In the Export Range tab:
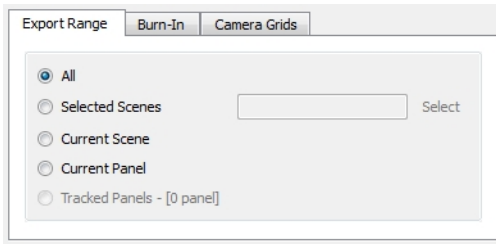
‣ Decide whether you want to export the entire project (All), just a selected frame range, a selected scene, a selected panel, or tracked panels. If you decide on the latter, be sure to enter in the frame range in the fields provided. In the **Scene Picker** dialog box, you can select your scenes by sequence if your project contains sequences—see *Tracking Changes* on page 427.

6. In the Burn-in tab:

‣ **Print Time Code**: Prints the project timecode on the video as an overlay on your video.

‣ **Print Scene Names and Panel Numbers**: Prints the scene names and panel numbers as an overlay on your video.

‣ **Print Panel Time Code**: Prints each panel's timecode on the video as an overlay on your video.

‣ **Print Additional Duration**: Prints an additional duration on your video, defined by the Units and Repeat drop-down menu.

‣ **Units**: Choose either you want the additional duration information to be displayed using **Time Code** or **Frames** units.

‣ **Repeat**: Choose either you want the additional duration information to be the duration **per Panel**, **per Scene** or **per Sequence**.

NOTE: You can customize the font type, size, colour and location of the printed time code using the Preferences panel—see *Burn-In* on page 494.

7. In the Camera Grids tab, do the following:
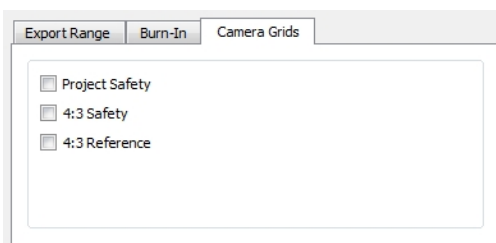
- **Project Safety**: Prints the safe area on your video–see _Safe Area_ on page 57.
- **4:3 Safety**: Prints the 4:3 safe area on each panel of your storyboard that has a camera movement–see _4:3 Safety_ on page 57.
- **4:3 References**: Prints the 4:3 area on each panel of your storyboard that has a camera movement–see _4:3 Safety_ on page 57.

8. Select the **Open document/folder after export** option to view the file when it is ready.

QuickTime Movie Settings

When QuickTime is your chosen export format, the following becomes available in the **Movie Options** button. Some of the QuickTime movie settings will be overridden by the Storyboard Pro project or export settings.

This section includes the following topics:

- _QuickTime Video Settings_ on page 469
- _QuickTime Sound Settings_ on page 470

To set the QuickTime movie options:

1. From the Export to Movie window, click **Movie Options** to display the QuickTime movie settings:
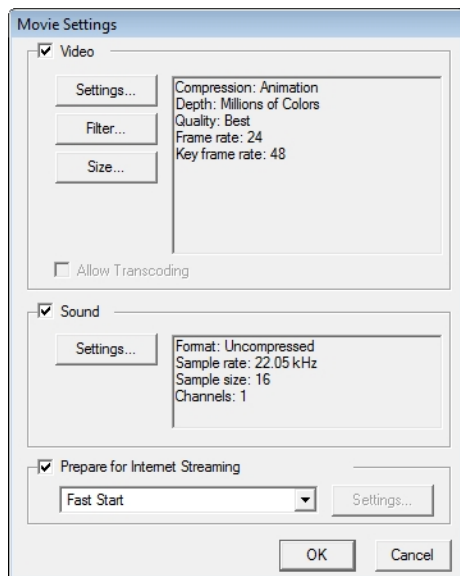
‣ **Video**: Lets you customize the video settings, filters, and size.

- **Settings**: Opens the Standard Video Compression Settings dialog box (see below).

- **Filter**: Opens the Choose Video Filter dialog box, where you can select from a range of filters to apply to your video export.

- **Size**: Opens the Export Size Settings dialog box, where you can choose a different export size from the settings predefined for your project.

‣ **Sound**: Lets you customize the sound settings.

- **Settings**: Opens the Sound Settings dialog box (see below).

‣ **Prepare for Internet Streaming**: Lets you customize the Internet streaming options.

- **Internet Streaming drop-down**: Lets you set the type of streaming best suited for your needs.

QuickTime Video Settings

1. In the Video section, click **Settings**.

   The Standard Video Compression Settings dialog box opens.
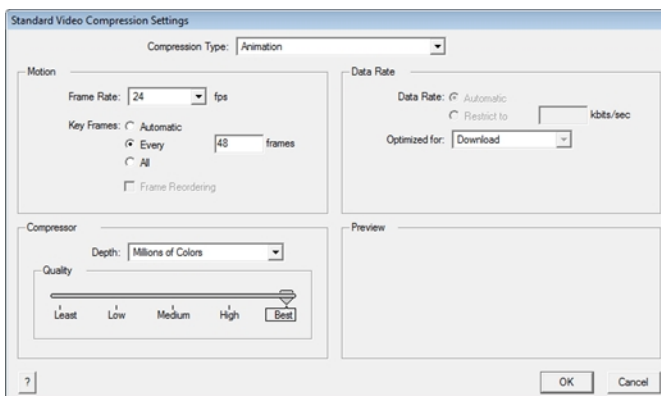
2. From the Compression Type menu, select a codec.

NOTE:
Depending on your QuickTime version, there are different codecs available. Users with QuickTime Pro or Final Cut Pro installed on their machine will see a longer list of options.

The availability of certain compression settings depends on the compression type selected. For example, Animation is the default compression type and as a result, the Data Rate option becomes unavailable.

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3. In the Motion section, set the frame rate.

NOTE: The frame rate set in your Storyboard Pro project will override this QuickTime setting.

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4. **Key Frames**: Inserts key frames. If you do, set the number per frame.

This option is recommended by QuickTime. A further description of this topic is cited below.

Many compressors use "frame differencing" to compress moving images. Frame differencing is the process of determining what information has changed from a starting frame (called a "key frame") to subsequent frames. The key frame contains all of the information for an image. Subsequent frames contain only the information that has changed.

Depending on the compressor you use, you can specify how often you want key frames to occur. If you don't have enough key frames, the quality of your movie might be lower because most frames are generated from others. However, more key frames result in a larger movie with a higher data rate. With some compressors, an additional key frame is inserted automatically if too much of the image has changed from one frame to the next.

A good rule of thumb for general use is to have one key frame every 5 seconds (multiply the frames per second by 5). If you are creating a file for RTSP streaming and have concerns about the reliability of the delivery network (as with the public Internet), you may want to increase key frame frequency to one key frame every 1 or 2 seconds.

> **NOTE:** Storyboard Pro does not support all the options for all codecs. With the H.264 codec, you must select Keyframe: All.

5. From the Compressor section, choose a Depth based on your movie's needs. For example, Millions of Colours+ houses an alpha channel.

6. In the Quality section, choose a quality setting. Remember that the better the quality of the export, the larger the file.

7. From the Data Rate section, either choose to allow the program to automatically select the most optimal bit rate, or enter in a restricted rate to save space and allow for faster downloading at a cost to the quality of your export.

8. In the same section, from the Optimized For menu, select the intended viewing method for your export.

9. Click OK.

> **NOTE:** The resolution set in the Export to Movie window will override the QuickTime Size settings.

QuickTime Sound Settings

1. From the Movie Settings dialog box, click **Sound Settings**.

   The Sound Settings dialog box opens.
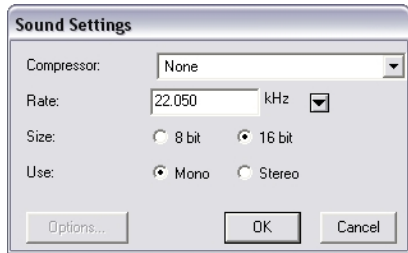
2. From the Compressor menu, select a compression type.

   The default setting is None. This preserve your original sound file without the loss of information. However, an uncompressed sound file will inevitably add "weight" to the overall size of your video export.

3. Select a **Rate** by pressing the down arrow button next to kHz.

   It is best to check and match the original properties of your sound file. For example, if your file has an audio sample rate of 48 kHz and you choose a conversion rate of 22.05 kHz, the sound will play at the same speed, but with higher frequencies missing.

   For a standard film sound quality, choose 44.1 kHz, or 48 kHz for DVD quality. Anything less will make the sound "dull" or less bright. For things like recorded voice, it does not matter so much, but for music, it can make an audible difference.

   If file size is a consideration, such as with videos for the Internet, then a lower rate may be more practical.

4. Choose the Size and the Use, which are related. Once again, check your original sound file properties. If the file was recorded in one channel (mono), there is no reason to choose the two channel (stereo) option. Although mono can support a 16-bit channel, the extra information is unnecessary. Mono is generally paired with 8-bit and Stereo with 16-bit.

5. Click OK.

Exporting an SWF Movie (Flash)

To export an SWF Movie:

1. From the top menu, select **File > Export > Movie.**

The Export to Movie dialog box opens.
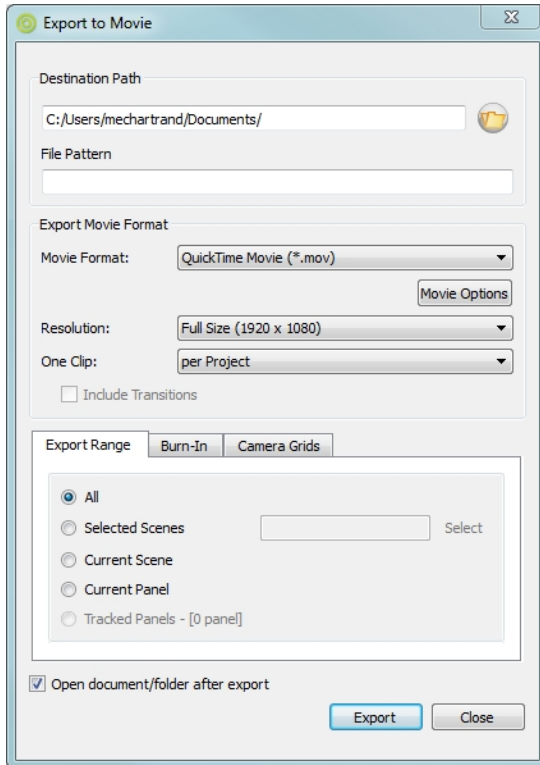
2. In the Destination Path section, click the Browse 📁 button and choose a folder in which to save your movie.

3. From the Export Movie Format panel:

   ‣ From the Movie Format menu, select **Flash (*.swf)**.

   ‣ Select the Resolution from the drop-down menu. This will be a quarter size, half size, or full size of the current storyboard resolution.

4. Click **Movie Options** to display the Flash Export Settings dialog box.
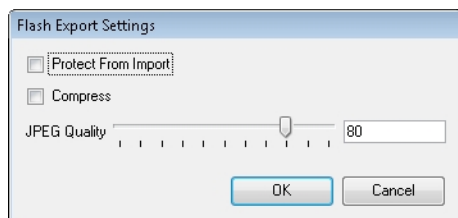
   ‣ To protect your movie from being imported in another application, select the **Protect from Import** option.

   ‣ To get a lighter format, select the **Compress Movie** option. The movie may lose some quality, but in turn create a lighter file.

   ‣ Select the quality of the video image with the JPEG Quality slider.

- 100 = Full quality

- 50 = Average quality at about 1/5th of the size.

- 25 = Medium quality, loss of high image resolution starts to occur.

- 10 = Low quality, "macro-blocking" or large pixelation become obvious.

- 1 = Lowest quality, extreme loss of colour and detail, the image becomes virtually unrecognizable.

5. Click OK.

6. In the Export Range tab:

‣ Decide whether you want to export the entire project (All), just a selected frame range, a selected scene, a selected panel, or tracked panels. If you decide on the latter, be sure to enter in the frame range in the fields provided. In the **Scene Picker** dialog box, you can select your scenes by sequence if your project contains sequences—see *Tracking Changes* on page 427.

7. In the Burn-in tab:

‣ **Print Time Code**: Prints the project timecode on the video as an overlay on your video.

‣ **Print Scene Names and Panel Numbers**: Prints the scene names and panel numbers as an overlay on your video.

‣ **Print Panel Time Code**: Prints each panel's timecode on the video as an overlay on your video.

‣ **Print Additional Duration**: Prints an additional duration on your video, defined by the Units and Repeat drop-down menu.

‣ **Units**: Choose either you want the additional duration information to be displayed using **Time Code** or **Frames** units.

‣ **Repeat**: Choose either you want the additional duration information to be the duration **per Panel**, **per Scene** or **per Sequence**.

NOTE: You can customize the font type, size, colour and location of the printed time code using the Preferences panel—see *Burn-In* on page 494.

8. In the Camera Grids tab, do the following:

- • **Project Safety**: Prints the safe area on your video—see *Safe Area* on page 57.
- • **4:3 Safety**: Prints the 4:3 safe area on each panel of your storyboard that has a camera movement— see *4:3 Safety* on page 57.
- • **4:3 References**: Prints the 4:3 area on each panel of your storyboard that has a camera movement— see *4:3 Safety* on page 57.

9. Select the **Open document/folder after export** option to view the file when it is ready.

Exporting an Image Sequence

To export an Image Sequence:

1. From the top menu, select **File > Export > Movie**.
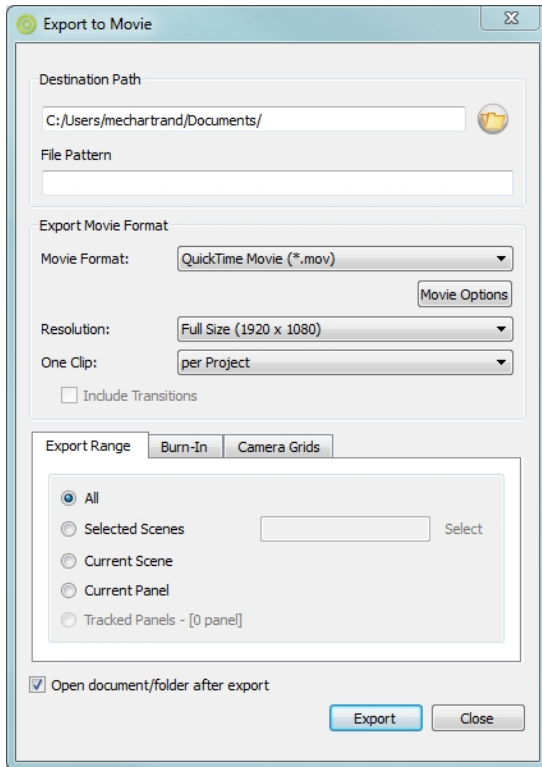
    The Export To Movie dialog box opens.

2. In the Destination Path section, click the Browse 📁 button and choose a folder in which to save your image sequence.

3. From the Export Movie Format panel:
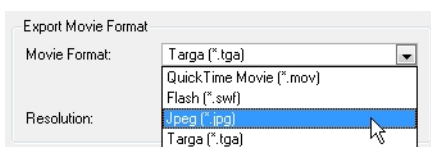
   ‣ From the Movie Format menu, select **Jpeg (*.jpg)** or **Targa (*.tga)**.
   ‣ Select the Resolution from the drop-down menu.

4. In the Export Range tab:
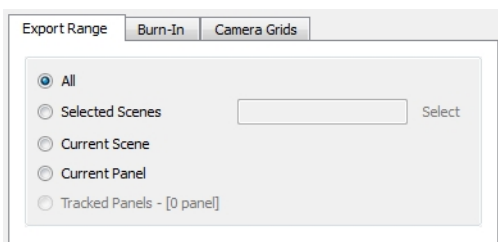
‣ Decide whether you want to export the entire project (All), just a selected frame range, a selected scene, a selected panel, or tracked panels. If you decide on the latter, be sure to enter in the frame range in the fields provided. In the **Scene Picker** dialog box, you can select your scenes by sequence if your project contains sequences—see *Tracking Changes* on page 427.

5. In the Burn-in tab:

‣ **Print Time Code**: Prints the project timecode on the video as an overlay on your video.

‣ **Print Scene Names and Panel Numbers**: Prints the scene names and panel numbers as an overlay on your video.

‣ **Print Panel Time Code**: Prints each panel's timecode on the video as an overlay on your video.

‣ **Print Additional Duration**: Prints an additional duration on your video, defined by the Units and Repeat drop-down menu.

‣ **Units**: Choose either you want the additional duration information to be displayed using **Time Code** or **Frames** units.

‣ **Repeat**: Choose either you want the additional duration information to be the duration **per Panel**, **per Scene** or **per Sequence**.

> NOTE: You can customize the font type, size, colour and location of the printed time code using the Preferences panel—see *Burn-In* on page 494.

6. In the Camera Grids tab, do the following:
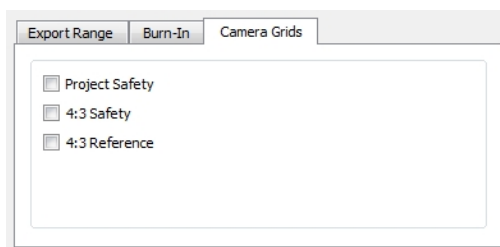
• **Project Safety**: Prints the safe area on your video—see *Safe Area* on page 57.

• **4:3 Safety**: Prints the 4:3 safe area on each panel of your storyboard that has a camera movement—see *4:3 Safety* on page 57.

• **4:3 References**: Prints the 4:3 area on each panel of your storyboard that has a camera movement—see *4:3 Safety* on page 57.

7. Select the **Open document/folder after export** option to view the file when it is ready.

Exporting a Soundtrack

In Storyboard Pro, you can export your project's soundtrack to an audio WAV file. You can either export the different soundtracks as one audio file or export all soundtracks separately.

To export a soundtrack:

1. Select **File > Export > Soundtracks**.

   The Export Soundtracks dialog box opens.
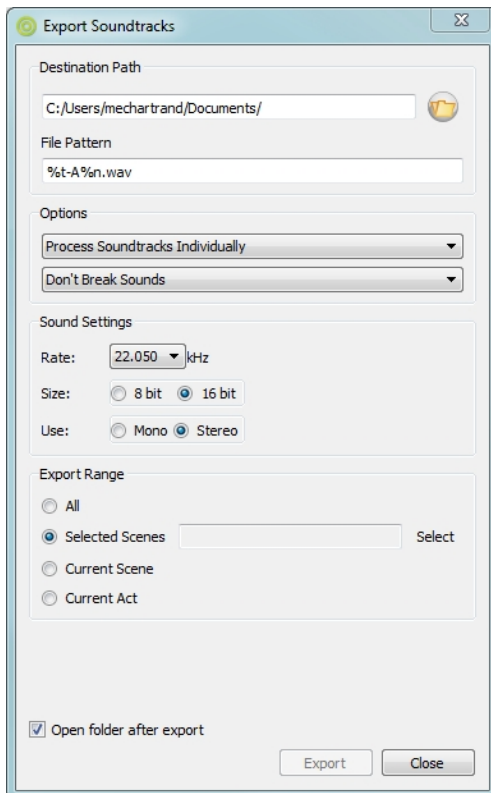
2. From the Destination Path section, click the Browse ☐ button. Select and name the folder in which to save the exported soundtrack.

3. In the File Pattern field, you can set your own pattern name. The default File Pattern is %t-A%n.wav.

   ‣ %t = Project title
   ‣ %n = Soundtrack number

   For example, if you export separate soundtracks for a project named The Story of the Three Little Pigs, the resulting audio files will be named: `The Story of the Three Little Pigs-A1.wav`, `The Story of the Three Little Pigs-A2.wav`, `The Story of the Three Little Pigs-A3.wav`, …

4. In the Options section, select the way you want the software to process your soundtracks:

   ‣ **Process Soundtracks Individually**: Exports the different sound layers to be exported as individual soundtracks.
   ‣ **Merge All Soundtracks**: Merged all the sound layers onto one single soundtrack.

‣ **Don't Break Sound**: Exports the sound layers as one complete soundtrack. Depending on whether you selected to export the sound layers individually or merged, one single soundtrack will be exported or one soundtrack per layer will be exported.

‣ **Break Sound Per Scene**: Divides the soundtracks in sound files per scene. Depending on whether you selected to export the sound layers individually or merged, one single soundtrack will be exported per scene or one soundtrack per layer will be exported per scene.

‣ **Break Sound Per Sequence**: Divides the soundtracks in sound files per sequence. Depending on whether you selected to export your sound layers individually or merged, one single soundtrack will be exported per sequence or one soundtrack per layer will be exported per sequence.

‣ **Break Sound Per Act**: Divides the soundtracks into sound files per act. Depending on whether you selected to export your sound layers individually or merged, one single soundtrack will be exported per act or one soundtrack per layer will be exported per act.

5. In the Sound Setting section:

‣ **Rate**: Lets you select the Khz sample rate value. A higher value results in a better quality sound but heavier file.

‣ **Size**: Sets the audio file bit depth to 8 or 16 bit. A higher bit value will result in a better quality sound but heavier file.

‣ **Use**: Select the exported audio files channels to be either **Mono** or **Stereo**.

6. In the Export Range section:

‣ **All**: Exports the entire storyboard's soundtrack.

‣ **Selected Scenes**: Enable this option and click **Select** to open the Scenes Picker dialog box, in which you can select specific scenes to export the soundtrack from. In the Scene Picker dialog box, you can select your scenes by sequences if your project contains sequences

‣ **Current Scene**: Exports only the currently selected scene's soundtrack.

‣ **Current Act**: Exports only the currently selected act's soundtrack.

7. Select the **Open folder after export** option to have the system automatically open the folder containing your exported audio files.

Export to EDL/AAF/XML

Once a storyboard is done, there are several reasons to send it to a Non Linear Editing (NLE) system. It could be to complete the animatic in a real editing suite with a direct return on TV, or it could be to use it as a pre-editing map to replace the storyboard scenes with the final materials (shot in live action or rendered from a 2D or 3D software).

It is possible to export your storyboard project, and preserve the timing, motions and sounds edited with Storyboard Pro, directly to Apple Final Cut Pro using EDL or XML formats or to Adobe Premiere, Avid Xpress, or Sony Vegas using AAF format.

This section includes the following topics:

- *File Name Patterns When Exporting* on page 478

File Name Patterns When Exporting

It is possible to define sequential file name patterns when exporting to Image Sequence, Bitmap, EDL, and AAF (movie files).

For example:`%4s.%2p.%3f.%4F.tga`

%4s => **shot name** on 4 chars (all export formats)

%2p => **panel name** on 2 chars (all export formats)

%3f => **frame** on 3 chars (Image Sequence and Bitmap)

%4F => **global frame** on 4 chars (Image Sequence Only)

Where:

% means it will be replaced by:

s (shot name)

p (panel number)

f (local frame number in panel)

F (global frame number in timeline)

The number in-between represents the minimum length to display it. If the text-value is shorter than this length, it will be left-padded by 0 (zero).

For example:

If the frame number is 48, and the user specifies the following in file name:

%1f = you will see "**48**" in file name.

%2f = you will see "**48**" in file name.

%3f = you will see "**048**" in file name.

%4f = you will see "**0048**" in file name.

This section will explain how to export your storyboard in EDL or AAF format, then how to import your project into a major NLE system.

To export a storyboard to EDL or AAF or XML:

1. Select **File > Export > EDL/AAF/XML**.

   The Export to EDL/AAF/XML dialog box opens.
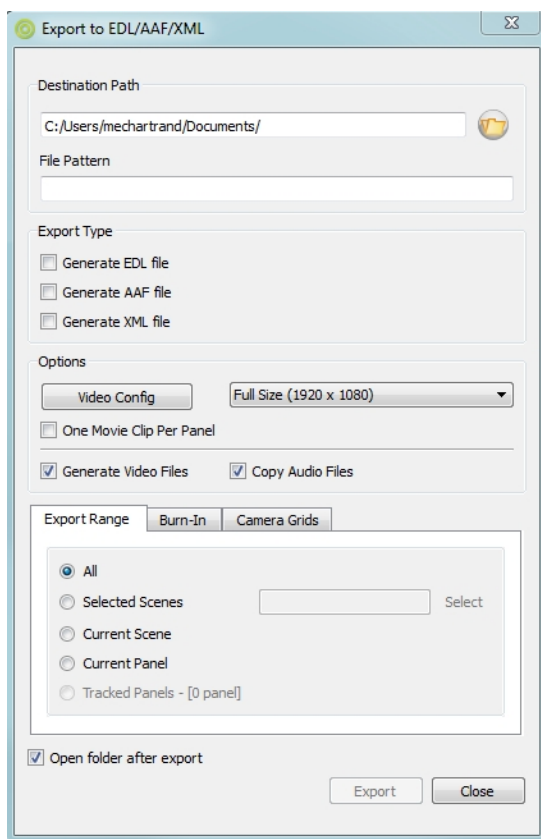
2. In the Destination Path, select a folder in which to save your storyboard project. You can type in the exact path or use the Browse ⌂ button to browse to a specific folder on your system. You should create a folder for your exported project since Storyboard Pro will generate several files during the export.

3. In the File Pattern field, you can set your own pattern which will be used to name the files created from the export. Leave this field blank to use the default pattern. The following variables can be used to define the file name pattern:

   ‣ %t = Project title

   ‣ %a = Act name (when acts are enabled)

   ‣ %q = Sequence name (when project contains sequences)

   ‣ %s = Scene name

   ‣ %p = Panel name

   ‣ %l = Layer name (when exporting one image per layer)

   You can add a number between the % sign and the letter of the variable to define a minimum number of characters to use.

4. In Export Type, select the format in which to store the timing information (timecode for panels and audio tracks). The format will be chosen depending on the destination application:

   ‣ Application Format Notes:

- Apple Final Cut Pro EDL: In EDL, if you are using audio elements more than once in the timeline, FCP will not be able to reconnect the media. AAF is supported in FCP with a plug-in from Automatic Duck. Final Cut Pro also supports XML.

- Adobe Premiere Pro AAF (Windows)

- EDL (Mac OS X) With EDL, media will have to be linked manually one by one. Premiere Pro on Windows cannot open AAF coming from Windows (and AAF is not supported on the Mac OS X version of Premiere Pro).

- Avid Xpress AAF

NOTE: If your editing system is not in the list, check its specifications to verify which format can be imported.

5. In the Options section:

‣ Use the resolution drop-down menu to define the output resolution since you might not always need to export the storyboard at full resolution (you can select Full, Half or Quarter of a project's resolution).

‣ The One Movie Clip Per Panel option is useful if you want to export more than one QuickTime movie clip per scene (which might contain more than one panel) e.g. to obtain better granularity during editing since the storyboard will have smaller movie clips.

‣ The storyboard scenes are exported in QuickTime format. Click **Video Config.** to configure the video settings (codecs, quality)—see *Exporting a QuickTime Movie* on page 465 to learn more about the option available via the Video Config. button.

‣ **Generate Video Files**: If you only need the EDL, AAF or XML files to be generated, you can deselect this option and no video files will be rendered.

‣ **Copy Audio Files**: By default, during the export to EDL/AAF, the original sound elements used are copied to the same location as the QuickTime movie clip's and the EDL or AAF file. If sound elements in the timeline are used more than once, the elements are not duplicated. The EDL/AAF refers to the same sound elements. You can deselect this option if needed.

6. In the Export Range tab:

‣ Decide whether you want to export the entire project (All), just a selected frame range, a selected scene, a selected panel, or tracked panels. If you decide on the latter, be sure to enter in the frame range in the fields provided. In the **Scene Picker** dialog box, you can select your scenes by sequence if your project contains sequences—see *Tracking Changes* on page 427.

7. In the Burn-in tab:

- ▸ **Print Time Code**: Prints the project timecode on the video as an overlay on your video.
- ▸ **Print Scene Names and Panel Numbers**: Prints the scene names and panel numbers as an overlay on your video.
- ▸ **Print Panel Time Code**: Prints each panel's timecode on the video as an overlay on your video.
- ▸ **Print Additional Duration**: Prints an additional duration on your video, defined by the Units and Repeat drop-down menu.
- ▸ **Units**: Choose either you want the additional duration information to be displayed using **Time Code** or **Frames** units.
- ▸ **Repeat**: Choose either you want the additional duration information to be the duration **per Panel**, **per Scene** or **per Sequence**.

NOTE: You can customize the font type, size, colour and location of the printed time code using the Preferences panel—see *Burn-In* on page 494.

8. In the Camera Grids tab, do the following:

- • **Project Safety**: Prints the safe area on your video—see *Safe Area* on page 57.
- • **4:3 Safety**: Prints the 4:3 safe area on each panel of your storyboard that has a camera movement—see *4:3 Safety* on page 57.
- • **4:3 References**: Prints the 4:3 area on each panel of your storyboard that has a camera movement—see *4:3 Safety* on page 57.

9. Select the **Open document/folder after export** option to view the file when it is ready.

NOTE: Refer to the third party software's user guide to learn how to import and use the EDL/AAF/XML file.

Exporting Your Storyboard to FBX

You can export your storyboard project in FBX format, which allows you to store any motion data (from element motion or Camera angles/zooms), as well as the 2D and 3D elements in your scene. Once exported to FBX, you can open the storyboard elements in a third-party 3D application and continue to work on them.

You would only export these elements to FBX once you are finished with them in Storyboard Pro. Normally, you would not bring these elements back into Storyboard Pro.

To export a storyboard to FBX format:

1. Select **File > Export > FBX**.

   The Export to FBX dialog box opens.
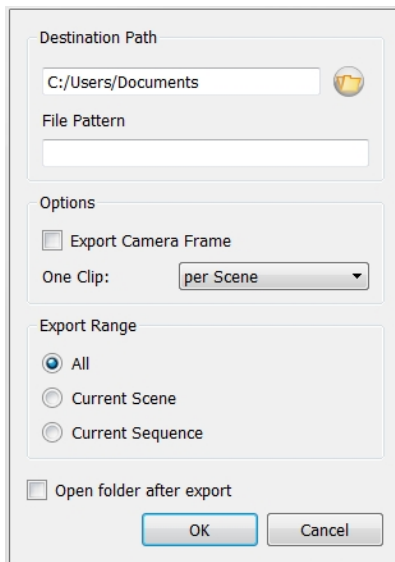
2. In the Destination Path section, click the Browse 📁 button and choose a folder in which to save your image sequence.

3. In the File Pattern field, type a name for the exported files.

4. To include the camera frame's black border in the scene, select the **Export Camera Frame** option.

5. From the One Clip list, select one of the following:

   ‣ **Per Scene**: Exports one clip per scene.

   ‣ **Per Project**: Exports one clip for the entire project.

   ‣ **Per Sequence**: Exports one clip per scene. This option is available only if your project contains sequences.

6. In the Export Range section, select how many scenes to include in the exported files:

   ‣ **All:** Includes all the scenes in your project.

   ‣ **Current Scene**: Includes only the scene you selected when you opened this dialog box.

   ‣ **Current Sequence**: Includes only the scenes from the sequence you selected when you opened this dialog box. This option will only be visible if your project contains sequences.

7. Click OK.

Your objects are saved as an FBX file in the folder you specified.

Exporting to Toon Boom

Using Storyboard Pro, you can export your animatic as Stage, Animate 2, and Animate Pro 2 scene files. You can select to export your whole storyboard project or only a selection of scenes. Once your export is ready, you can open it in the destination software. When you first save this new scene, the exported file will be converted as the proper format depending on the software you used.

The following elements of your storyboard will be exported to the Toon Boom project:

- Layers
- Layer motion
- Camera moves

Before exporting to Toon Boom, you can use the Layers view to deselect specific layers. In the Layers view, deselect the Toon Boom option from the Export To section. Note that this layer will still be exported to Toon Boom, but it will be disabled. You can enter the symbol and re-enable it at anytime.
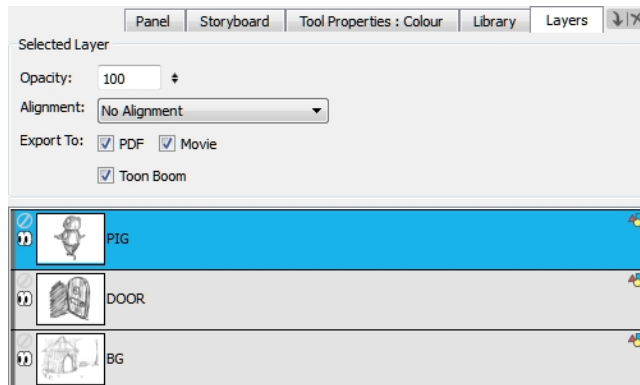
NOTE: Transitions and holds in the layer motions are not supported by the **Export to Toon Boom** option.

Refer to the *Layers* on page 151 chapter to learn more about the Layers view.

To export to Toon Boom:

1. Select **File > Export > Export to Toon Boom**.

The Export to Toon Boom dialog box opens.
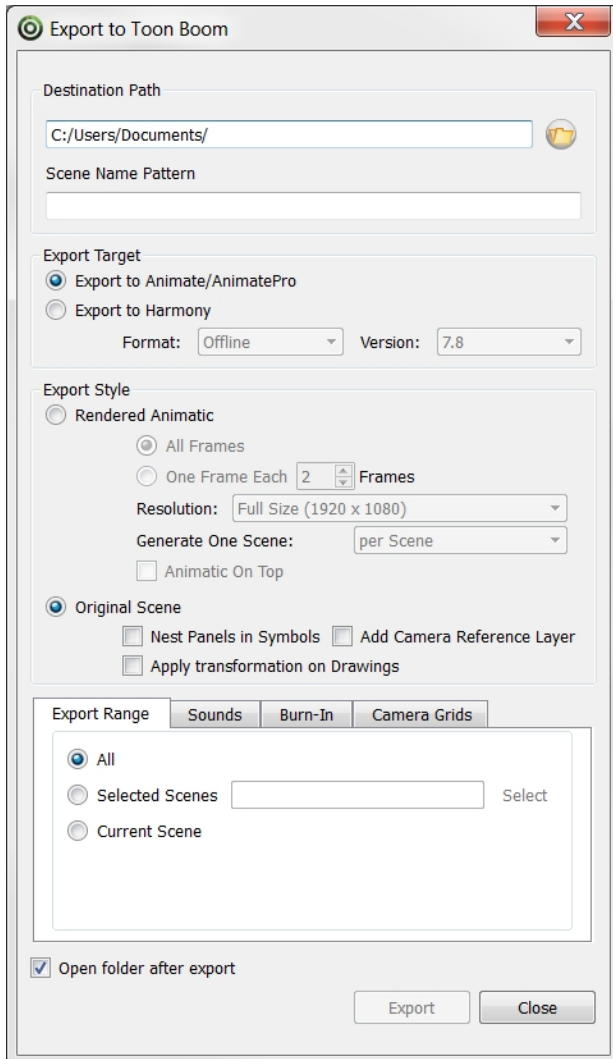
2. In the Destination Path, select a folder in which to save your storyboard project. You can type in the exact path or use the Browse 📁 button to browse to a specific folder on your system. You should create a folder for your exported project since Storyboard Pro will generate several files during the export.

3. In the Scene Name Pattern field, you can set your own pattern which will be used to name the Harmony scenes created from the export. Leave this field blank to use the default pattern. The following variables can be used to define the scene name pattern:

    ▸   %t = Project title

    ▸   %a = Act name (when acts are enabled)

    ▸   %q = Sequence name (when project contains sequences)

    ▸   %s = Scene name

    You can add a number between the % sign and the letter of the variable to define a minimum number of characters to use. For example, if the scene is named 16 and the Scene Name Pattern value is MyProject_sc%4s, the resulting export will be named: MyProject_sc0016.

For example, if you export separate soundtracks for a project named The Story of the Three Little Pigs, the resulting audio files will be named: The Story of the Three Little Pigs-A1.wav, The Story of the Three Little Pigs-A2.wav, The Story of the Three Little Pigs-A3.wav, ...

4. In the Export Target section, select the Toon Boom animation software you want to export to:

  ‣ **Export to Animate/Animate Pro**: Select this option to export to either Animate or Animate Pro.

  ‣ **Export to Harmony:** Enable this option to either export to Harmony Server or Harmony Stand-alone.

    • To determine if your export will be created for Harmony Server or Stand-alone, in the Format menu, select the **Offline** option for a Stand-alone export or **To Database** for a Network format.

    • Depending on which Harmony version you have, select either **7.8** or **9.2 or higher**.

5. From the Export Style section:

  ‣ Select the **Rendered Animatic** option to export a storyboard to be rendered in bitmap images and contained in an Animate / Animate Pro/Harmony scene. For each scene in your storyboard, an Animate / Animate Pro/Harmony scene will be created. You should use this option if you have 3D content, and want to export to Animate,Animate Pro, or Harmony 9.2 and under. Also, use this option to export to Harmony if you have made use of bitmap drawing layers.

    • **All Frames**: Renders the full storyboard project.

    • **One Frame Each**: Renders only one frame for every chosen number of frames input by the user. For example, if a user chooses to render every 5 frames, then a new image will appear every fifth frame, with each image being held for 5 frames to maintain the timing.

    • **Resolution**: Lets you select the render size of the project: Full size, half size or quarter size.

    • **Generate One Scene**: Generates a scene by shot or by selected panels.

      ‣ **Per Scene**: Generates the scene by shots.

      ‣ **Per Selection**: Generates the scene by selected panels.

      ‣ **Per Sequence**: Generates the scene by sequences. Note that this option only appears when sequences are added in the project.

      ‣ **Per Act**: Generates the scene by act. Note that this option only appears when the **Enable Act** option is selected.

    • **Animatic on Top**: If you generate your scenes based on your sequences or acts, this option becomes available. When enabled, the animatic is rendered and placed as the top layer and column in Stage or Animate.

  ‣ Select **Original Scene** to export your storyboard in a project where the vector drawings, layers and camera settings are kept as is. For each shot scene in your storyboard, a Harmony/Animate scene is created.

    • **Nest Panels in Symbols**: Upon export to Harmony or Animate, your panel's content will be nested inside symbols. Instead of having several layers in your root timeline, you will have a single one. You will need to enter the symbol to edit its content.

    • **Add a Camera Reference Layer**: When enabled, a layer containing the different camera frames will be added on top of the other layers to use as a reference in Harmony and Animate.

    • **Apply Transformation on Drawings**: When enabled, transformation will be applied on the first and last position of each panel. Note that the in-between animation will be lost.

6. If you selected Rendered Animatic as the Export Style, you can now select the additional information you want to overlay on the exported images. This information is add to each image and is specific to the panel. You have the following choices:

- ▸ **Export Range:** Decide if you want to export the entire project (All), Selected Scenes, Current Scene, or the Current Act.

- ▸ **Sounds**: Using the drop-down menu, choose how the soundtrack will be exported:

  - **Keep Original Files:** Keeps and uses all original sound files.
  - **Process Soundtrack Individually:** Creates one audio file per soundtrack.
  - **Merge Soundtracks:** Creates a single audio file, gathering sounds from every soundtrack of your storyboard.

- ▸ **Burn-In**:

  - **Print Time Code**: Prints the global timecode on each rendered image.
  - **Print Scene Names and Panel Numbers**: Prints the scene names and panel numbers for the current frame.
  - **Print Panel Time Code**: Prints each panel's timecode for the current frame.

- ▸ **Camera Grids**: Adds boundaries to the images that indicate what the camera includes or excludes.

  - **Project Safety**: Prints the safe area on your video—see *Safe Area* on page 57.
  - **4:3 Safety**: Prints the 4:3 safe area on each panel of your storyboard that has a camera movement—see *4:3 Safety* on page 57.
  - **4:3 References**: Prints the 4:3 area on each panel of your storyboard that has a camera movement—see *4:3 Safety* on page 57.

7. Select the **Open document/folder after export** option to view the file when it is ready.

Conformation

In Storyboard Pro, you can export your storyboard project to Final Cut Pro 6, an Apple third party editing software, edit it, and then import the changes back into your Storyboard Pro project using the conformation feature. The conformation export will produce an XML file containing all your animatic project structure, as well as images of your panels. You can then import it into Final Cut Pro and it will recreate the animatic.
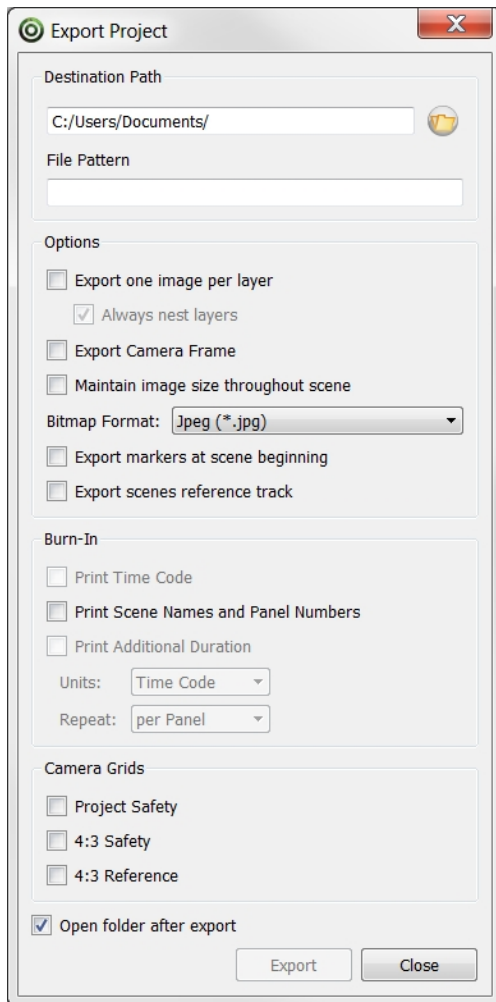
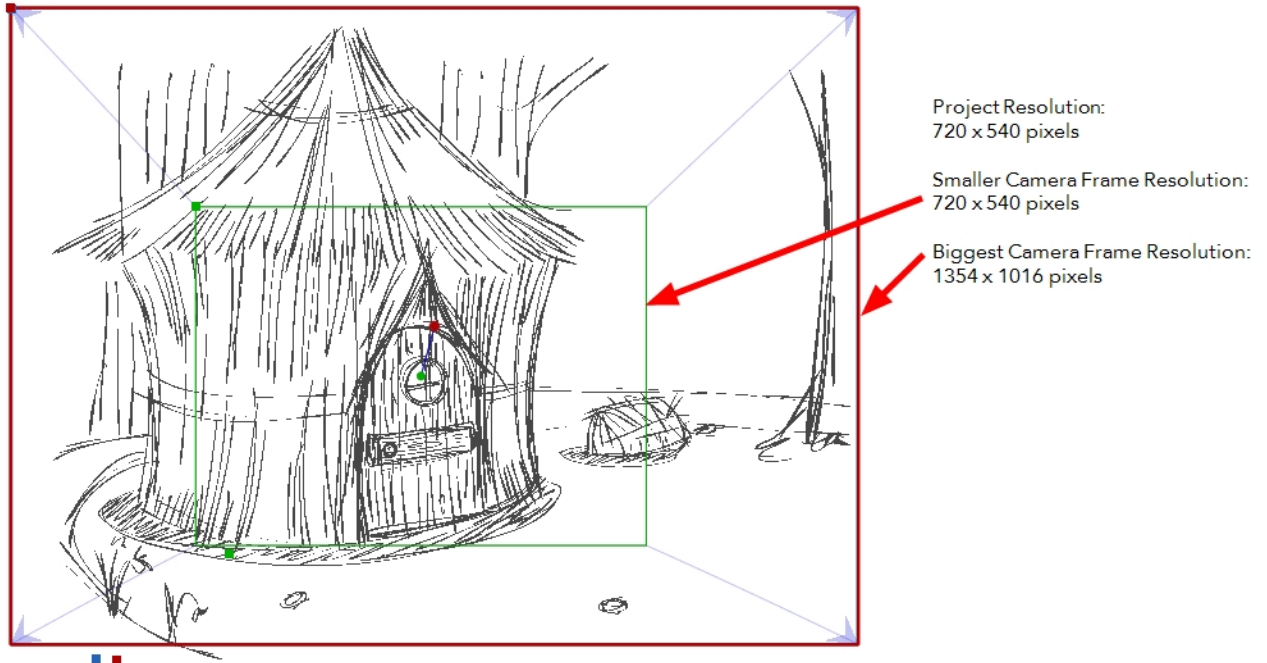This section includes the following topics:

Export Project

To export your entire storyboard project:

1. Select **File > Conformation > Export Project**.

   The Export Project dialog box opens.

2. In the Destination Path section, click the Browse 📁 button and specify a folder in which to save your exported files.

3. In the Options section:

    *   **Export one image per layer**: Keeps your layers on separate images instead of flattening each panel's layers into one flat image file. You can also select the **Always Nest Layers** option to nest your scene's layers inside one single clip. When this option is deselected, layers will not be nested into clips and will export as individual video tracks. This is true as long as a panel has either layer motion or a camera move, as it is not possible to export both without nesting. If a panel contains both motion on layers and a camera move, the panel will be nested into the V1 track.

    *   **Export Camera Frame**: Includes the camera frame's black border.

    *   **Maintain image size throughout scene**: Prevents image files from being different sizes depending on the camera frames and movements on each panel. To avoid the image from being pixelated when the camera is zoomed in, the image must be rendered larger. The area where the camera is the most zoomed in must be the same size as the project resolution. This means that the rest of the image has to be exported in proportion to the smallest area. Consider the following example:

Project Resolution:
720 x 540 pixels

Smaller Camera Frame Resolution:
720 x 540 pixels

Biggest Camera Frame Resolution:
1354 x 1016 pixels

- **Bitmap Format**: Lets you select a bitmap image format:

    - Targa (*.tga)
    - Photoshop (*.psd)
    - Portable Network Graphics (*.png)
    - Jpeg (*.jpg)

- **Export markers at scene beginning**: When this option is enabled, chapter marker will be placed at the beginning of each scene. These markers are used to find the in point of each scene when conforming from Final Cut Pro to Stage. The marker are named "Scene: NAME_OF_SCENE" and have a unique scene ID and chapter marker as their comment.

- **Export Scenes Reference Track**: Generates PNG images with the scene named burned in. When exporting to Final Cut Pro, this option must be enabled. The track will be used by Stage when conforming the XML from Final Cut Pro to find the scene in the XML.

4. Select the additional information you want to overlay on the exported images. This information will be added to each image and will be specific to the panel. Here are the choices:

    ‣ **Burn-In**: Adds information specific about the panels and their position in the Timeline.

        • **Print Time Code**: Prints the project timecode on the images as an overlay on your video.

        • **Print Scene Names and Panel Numbers**: Prints the scene names and panel numbers as an overlay on your images.

        • **Print Additional Duration**: Prints an additional duration on your video, defined by the Units and Repeat drop-down menu.

        • **Units**: Choose either you want the additional duration information to be displayed using **Time Code** or **Frames** units.

        • **Repeat**: Choose either you want the additional duration information to be the duration **per Panel**, **per Scene** or **per Sequence**.

    ‣ **Camera Grids**: Adds boundaries to the images that indicate what the Camera includes or excludes.

        • **Project Safety**: Prints the safe area on your video—see *Safe Area* on page 57.

        • **4:3 Safety**: Prints the 4:3 safe area on each panel of your storyboard that has a camera movement—see *4:3 Safety* on page 57.

        • **4:3 References**: Prints the 4:3 area on each panel of your storyboard that has a camera movement—see *4:3 Safety* on page 57.

5. Select the **Open folder after export** option to open the folder where the files are stored when the export is complete.

Exporting Selected Panels

To export selected panels:

1. In the Thumbnails view, select the panels you want to export to a third party software.

2. Select **File > Conformation > Export Selected Panels**.

   The Export Selected Projects dialog box opens.
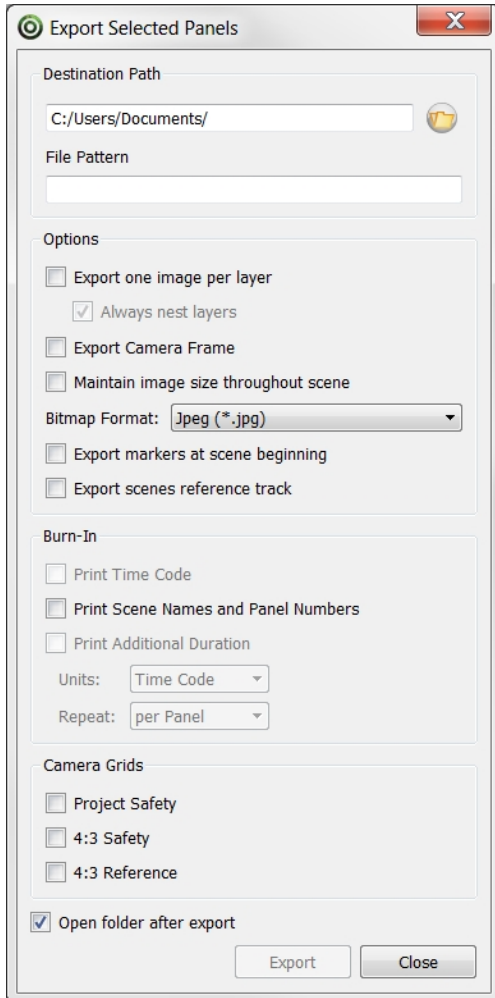
3. Set your export options in the **Export Project** dialog box.

Refer to the *Export Project* on page 487 topic above to learn more about the options available.
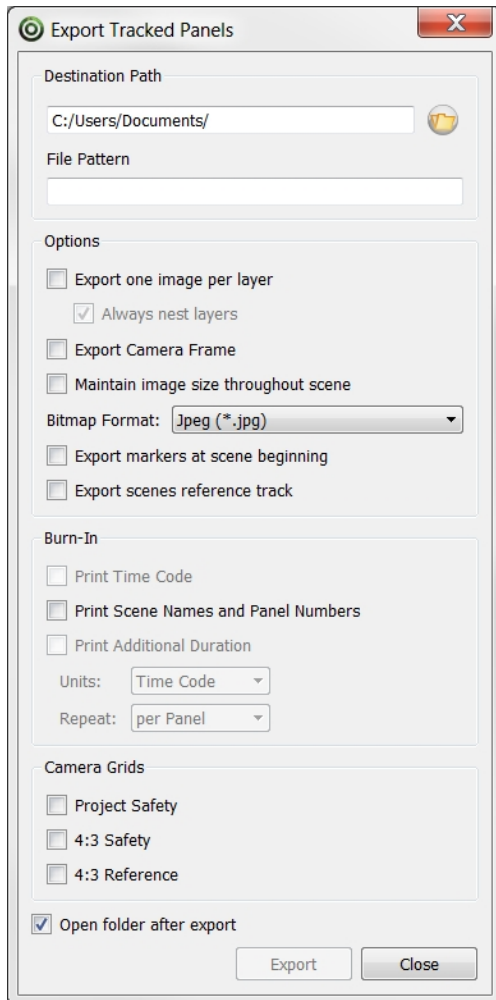
Exporting Tracked Panels

In Storyboard Pro, you can track changes in your panels and you can use the conformation feature to export tracked panels only—see *Tracking Changes* on page 427 and *Export Project* on page 487.

To export tracked panels:

1. Once you have tracked panels in your storyboard project, select **File > Conformation > Export Tracked Panels** from the top menu.

   The Export Tracked Panels dialog box opens.

2. Set your export options in the Export Tracked Panels dialog box.

Import Animatic

Once you have imported your project's conformation XML into Final Cut Pro 6 and completed editing, you will need to export it once again as an XML file to bring it back into your Storyboard Pro project.

> **NOTE:** Refer to your third party software's user guide to learn how to export the animatic project in an XML file format.

> **IMPORTANT:** You can only reimport a modified conformation XML file into the original project from which it was first exported.

To import an animatic:

1. In your original storyboard project, select **File > Conformation > Import Animatic Project**.

   The Import Project dialog box opens.
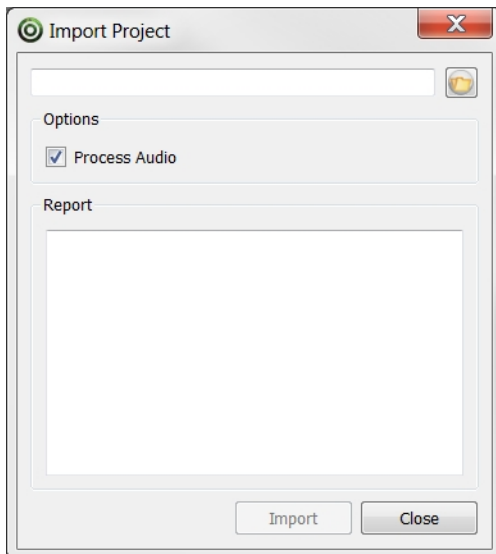
2. Click the Browse ⬚ button and locate your XML file.

3. In the Options section, the Process Audio is enabled by default, which means that the audio tracks will be conformed as well. Deselect this option if you do not want to conform the audio.

4. Click OK to return to the Import Project dialog box.

   The Report section displays information relative to the conformation process. If an error happened during the conformation process, this is also where the details relative to this error would appear.
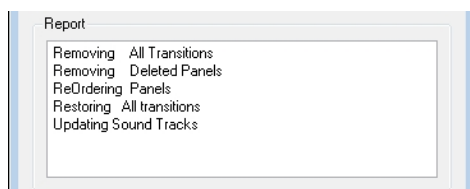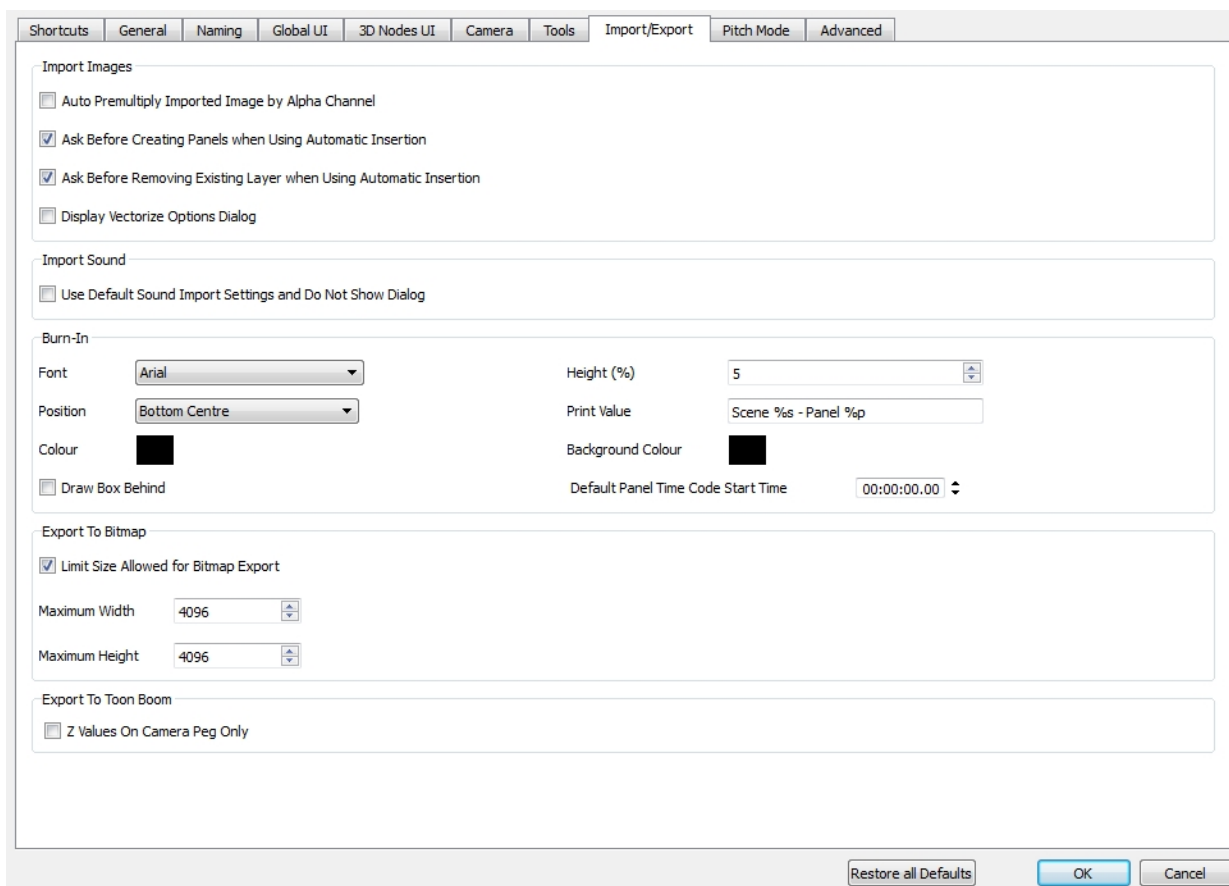
Preferences

In Storyboard Pro, there are preferences related to export under the Import/Export tab.

To open the Preferences dialog box:

1. Do one of the following:

    ‣ Select **Edit > Preferences** (Windows) or **Storyboard Pro > Preferences** (Mac OS X).

    ‣ Press [Ctrl] + [U] (Windows) or [⌘] + [,] (Mac OS X).

Import/Export Preferences

Burn-In

The following preferences are related to printed timecode when using the **File > Export > Movie** command—see

Exporting a Movie on page 465.

- **Time Code Font**: Lets you select the font in which you want the timecode to print when using the Export > Movie feature. This menu lists all the fonts available on your system.

- **Time Code Colour**: By default the timecode will print in black on your animatic. Click the colour swatch to open the Select Colour dialog box and select the colour of your choice.

- **Time Code Height**: Sets the height (in percentage) of the timecode font size.

- **Time Code Position**: Sets the position rule of the timecode of your animatic:

- Top Left
- Top Centre
- Top Right
- Bottom Left
- Bottom Left
- Bottom Centre
- Bottom Right

- **Draw Box Behind Time Code**: Spreads a colour rectangle behind the timecode. This can be useful when you have a colourful or high-contrast animatic and you can not easily find a font colour that stands out against the images.

- **Time Code Background Colour**: Click the colour swatch and choose a colour from the Select Colour dialog box that opens. This is the colour of the box that appears behind the timecode when the Draw Box Behind Time Code option is selected.

- **Default Panel Time Code Start Time**: Defines the default starting timecode for each panel when selecting the Print Panel Time Code option in the Export Movie dialog box.

Export to Bitmap

- **Limit Size Allowed for Bitmap Export**: Imposes a size limit when exporting bitmaps. When this option is selected, you can define the size limit in the two fields below.

- **Maximum Width**: When the Limit Size Allowed for Bitmap Export preference is selected, use this field to set the maximum width (in pixels) the exported image can have.

- **Maximum Height**: When the Limit Size Allowed for Bitmap Export preference is selected, use this field to set the maximum height (in pixels) the exported image can have.