Frame-by-frame animation in Animate CC

Create frame-by-frame animations

Frame-by-frame animation changes the contents of the Stage in every frame. It is best suited to complex animation in which an image changes in every frame instead of simply moving across the Stage. Frame-by-frame animation increases file size more rapidly than tweened animation. In frame-by-frame animation, Animate CC (formerly Flash Professional CC) stores the values for each complete frame.

To create a frame-by-frame animation, define each frame as a keyframe and create a different image for each frame. Each new keyframe initially contains the same contents as the keyframe preceding it, so you can modify the frames in the animation incrementally.

1. Click a layer name to make it the active layer, and select a frame in the layer where the animation is to start.

2. If the frame isn't already a keyframe, select Insert > Timeline > Keyframe.

3. Create the artwork for the first frame of the sequence. Use the drawing tools, paste graphics from the Clipboard, or import a file.

4. To add a keyframe whose contents are the same as the first keyframe, click the next frame to the right in the same row. Select Insert > Timeline > Keyframe, or right-click (Windows) or Control-click (Macintosh) and select...
Creating frame-by-frame animations by converting classic or motion tweens

You can convert a classic tween or a motion tween span to frame-by-frame animation. In frame-by-frame animation, each frame contains separate keyframes (not property keyframes) which each contains separate instances of the animated symbol. Frame-by-frame animation does not contain interpolated property values.

To complete your frame-by-frame animation sequence, right-click (Windows) or Ctrl-click (Macintosh) the tween span you want to convert and choose Convert to Frame by Frame Animation from the context menu.

Use onion skinning

Usually, one frame of the animation sequence at a time appears on the Stage. To help position and edit a frame-by-frame animation, view two or more frames on the Stage at once. The frame under the playhead appears in full color and apply color and alpha to differentiate between past and future frames.

Color coded onion skin is applied by default. To retain the old
Frame-by-frame animation in Animate CC

**animation on the Stage**

Onion skin markers

Start Onion Skin and End Onion Skin markers (in the Timeline header) are superimposed as one frame in the document window.

Color Coded Onion Skinning

Onion skinning color coding helps you distinguish between the past, present, and future frames. Onion skin frames that move away from active frame appear with progressively decreasing transparency.

Onion skinning on the timeline
Frame-by-frame animation in Animate CC

Color-coded onion skinning that shows the past, present, and future frames

Onion Skinning Outline Mode

Customizing Colors for Onion Skin Display

1. To customize the color of the onion skin frames, select the Onion skin frame in the Timeline bar.

2. Select Edit>Preferences.

3. In the Onion Skin Color option, select the color swatch buttons to customize and set colors for the Past, Present, and Future frames.
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Onion Skin Timeline Mode
Customized Onion skinning

- To change the position of either onion skin marker, drag its pointer to a new location. Normally, the onion skin markers move with the current frame pointer. Use Control/Command+ drag to increase or decrease the position on both sides.

- To enable editing of all frames between onion skin markers, click the Edit Multiple Frames button 📋. Usually, onion skinning lets you edit only the current frame. You can display the contents of each frame between the onion skin markers and edit them.

- To move the loop range across the timeline to any position that includes the playhead position, use the markers in the timeline to hold the Shift key and drag the range.

- To set the range markers, use the Shift key and drag the range markers or the loop range using the markers across
Locked layers (with a padlock icon) are not displayed when skinned.

Change the display of onion skin markers

1. Click the Modify Onion Markers button and select an item:

   - **Always Show Markers**: Displays the onion skin markers in the Timeline header whether or not onion skinning is on.

   - **Anchor Onion**: Locks the onion skin markers to their current position in the Timeline header. Usually, the onion skin range is relative to the current frame pointer and the onion skin markers. Anchoring the onion skin markers prevents them from moving with the current frame pointer.

   - **Onion 2**: Displays two frames on either side of the current frame.

   - **Onion 5**: Displays five frames on either side of the current frame.

   - **Onion All**: Displays all frames on either side of the current frame.
Preview your work

To check how your onion skinning is coming along, hover the mouse across the entire span on the timeline. Your animation plays in colored outlines giving you a precise preview of the changes.