

Smooth animations from Sketchup

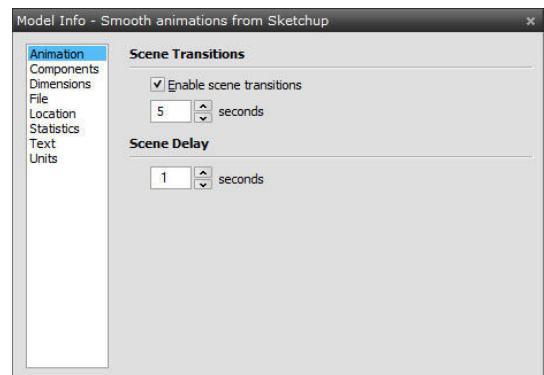
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Set up the model

In Animation settings (*Window/Model Info/Animation*) ensure that *Enable scene transitions* is ticked and set the transition to what suits the model, in this example I've set it to 5 seconds but I've set it as high as 30 on other projects, it just takes some experimentation.

Set *Scene Delay* to 1 second this will become useful later in the process.



Create a couple of folders

You will require a lot of space for animations using this method; 100Gb+ is not unusual for me, I use an external 400Gb USB drive just for this purpose.

I normally create a folder for the project and in there, a folder for the exported images:

E:\SmoothAnim-Demo

E:\ SmoothAnim-Demo\Tiff's

Now back to SketchUp

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A SketchUp Community Forum Tutorial
www.sketchucation.com/scf

Tutorial: Smooth Animations from SketchUp
Level: Intermediate
Author: Paul Russam
Date: September 2007

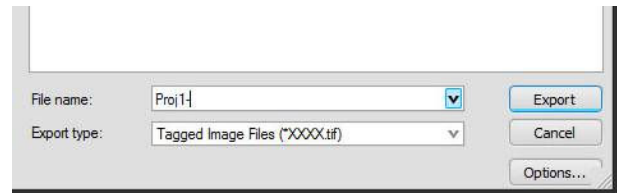
Export from Sketchup as TIFF's

Via the old forum I learned to export my TIFF's at twice the finished resolution. I normally produce my finished animations at 1024x768 therefore I export my TIFF'S at 2048x1536 this way you get nice thin lines.

Bring up the Export Animation dialog (*File/Export/Animation...*) and browse to the folder created above.

Make the Filename succinct and add a hyphen to the end like so: *Anim-* or *Model-* or *Proj1-* or *Existing-* etc. SketchUp is going to add a 4 digit number to the end of the filename for each frame so the resultant filenames will become *Proj1-0001.tif*, *Proj1-0002.tif* etc.

Set the export type to
Tagged Image Files (.XXXX.tif)*



Click the *Options...* button and set the width and height to twice what you want the finished animation to be; so for a 320x240 animation set the width and height here to 640 and 480. I'm going to produce this one at 1024x768 accordingly I'll set the width and height to *2048* and *1536*.

Ensure that *Loop to starting scene* is set to what you want, I usually set it to off and make a copy of the first scene at the end of the list.



Close the Options dialog and click the *Export* button.

After 10mins/10 hours/10 days depending up on your model/machine you will have hundreds if not thousands of TIFF's in the folder you created earlier.

I've just exported a 5 scene model with the above settings and I've got 302 files totalling 1.3Gb – told you they'd be big!

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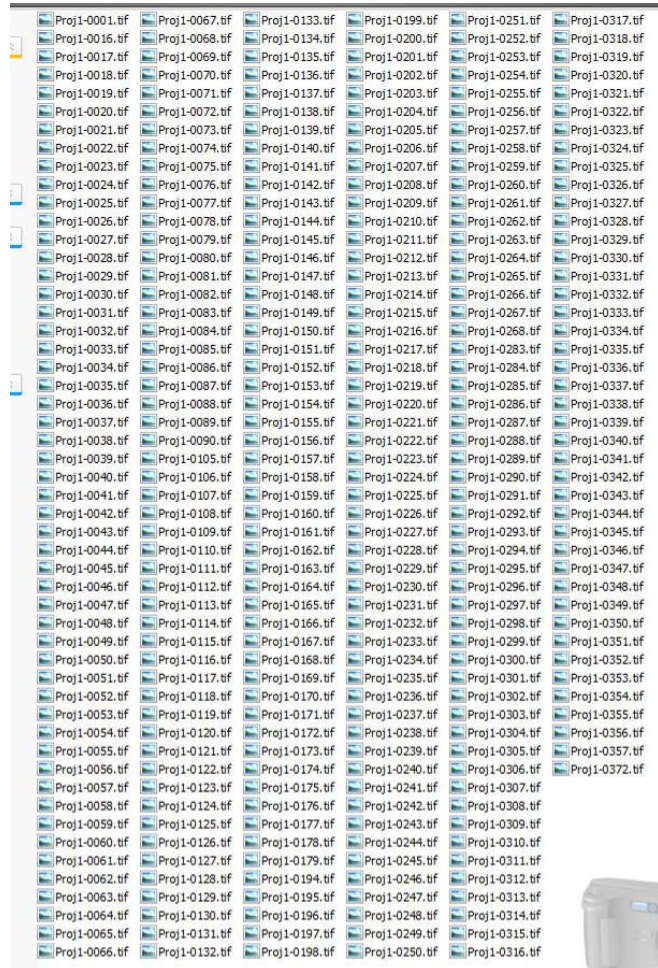
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Have a look at the list, something odd is happening. Where are files **0002 - 0015** and **0091-0104** and **0180 - 0193** etc. Well these are the 1 second *Scene delay* we specified earlier.

SketchUp has been smart enough not to render 14 identical frames, so frames 0002-0014 are exactly the same as 0001. On a big animation with lots of scenes this is a real time saver.

We're now almost ready to get into Adobe Premiere Elements but first we need to make the (potentially massive) list of files a little more manageable.



Sorting the Tiff's

We're going to import the Tiff's into Premiere in batches so it's a good Idea to sort them as such before we get going.

Create 6 folders called **SEQ-001,002,003,004,005 and 006**.

Move **Proj-0001.tif** into folder **SEQ-001**

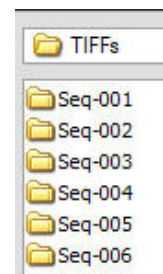
Move **Proj-0016.tif - Proj-0090.tif** into folder **SEQ-002**

Move **Proj-0105.tif - Proj-0179.tif** into folder **SEQ-003**

Etc.

You now should be looking at 6 folders instead of 300+ files.

I've written a Visual Basic Script (VBS) that does this in a flash and I'll cover this at the end of this tutorial.



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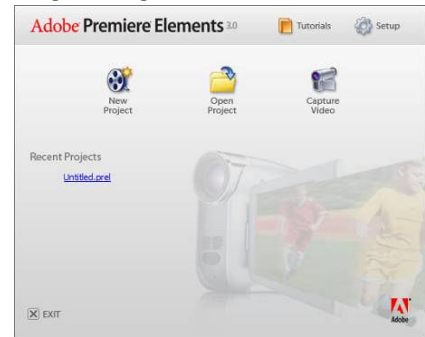
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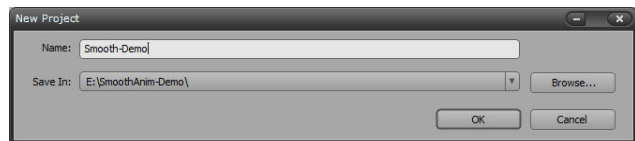
Adobe Premiere Elements – Create the Project

Fire up Premiere Elements and you'll be presented with the following dialog:

Select *New project*

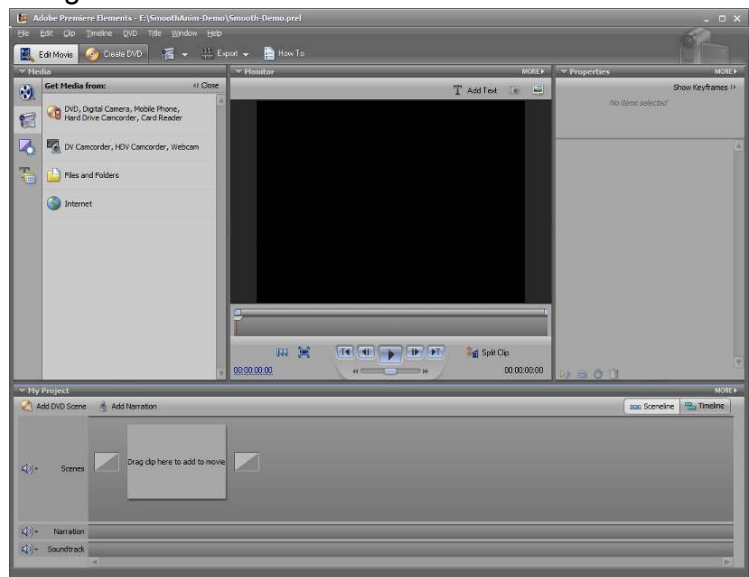


You will then be asked for a name and a location for the project. Give it a name and select the first folder created previously (E:\SmoothAnim-Demo In this example) for the location:



Premiere will start and you'll see the following interface:

I prefer the *Timeline* view as opposed to the default *Sceneline* one so in the bottom right (ish) is the screen click the *Timeline* button.

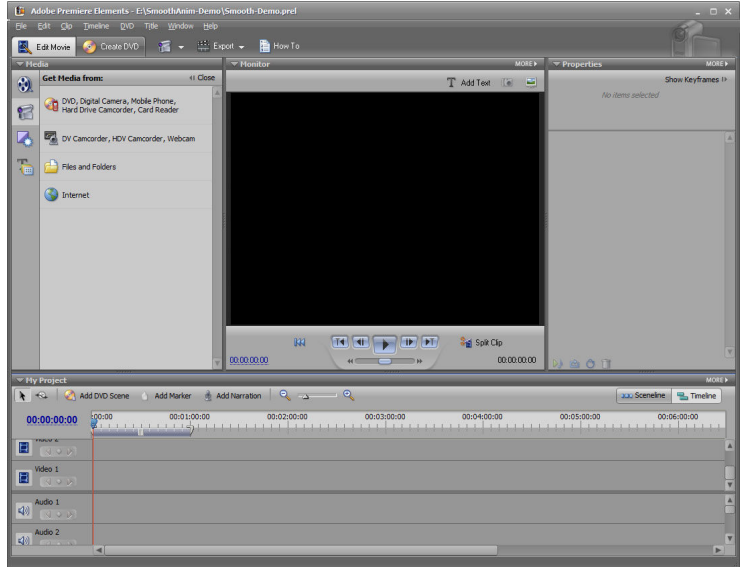


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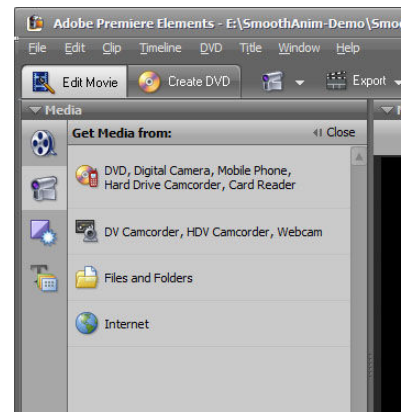
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The interface should now look like this:

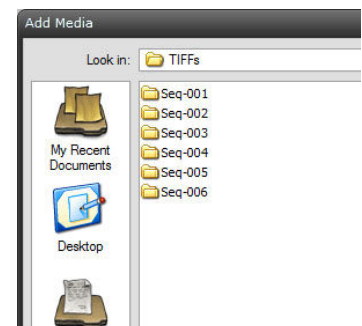


Importing the TIFF's

We're now ready to import the Tiff's into Premiere, select the *Files and Folders* icon from the *Get Media From* Dialog.



Browse to the Second folder created earlier (E:\SmoothAnim-Demo\Tiff's in this example) and then the SEQ-001 folder.



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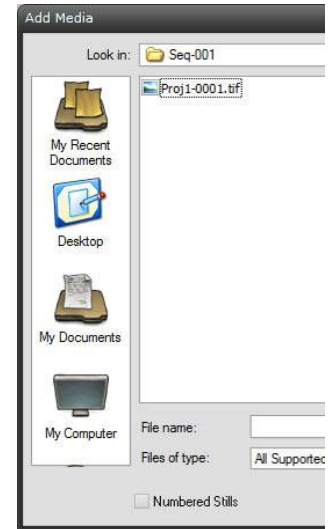
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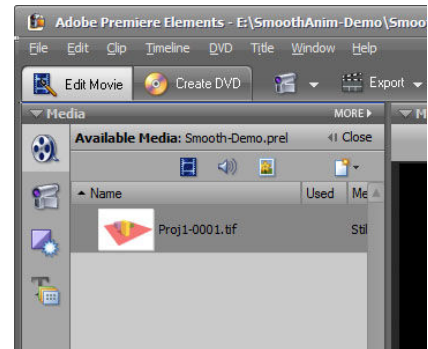
Select the Proj1-0001.tif file, note the small button at the bottom of the dialog – *Numbered Stills*

This should be *UNCHECKED* (for now)

Click the *Open* button and we're back to the main interface.



The Tiff is shown in the *Available Media* list and you can just make out that its marked as a *Still image*.

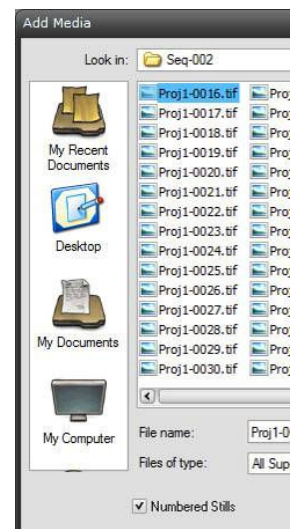


Go back to *Get Media From* and again select the *Files and Folders* icon



Browse to the SEQ-002 folder, select the FIRST file *Proj1-0016.tif* and this time make sure that the *Numbered Stills* button is *CHECKED*

Click the *Open* button and we're back to the main interface.



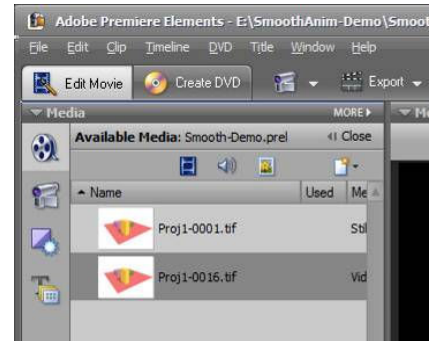
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The Available Media list now shows Proj1-0001.tif and Proj1-0016.tif BUT where 0001 is listed as a still, 0016 you can just make out is listed as a Video.

This is because it's only taken its name (Proj1-0016.tif) from the first file but it's actually all the TIFF's in that folder, or more precisely all the consecutive files starting with the one we selected.

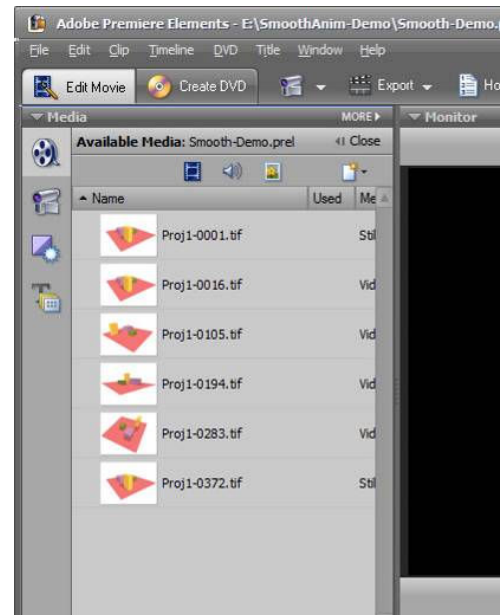


Repeat the above step of importing for SEQ-003, SEQ-004, SEQ-005, & SEQ-006

Remember to check that *Numbered Stills* is checked when there are multiple files in the folder (SEQ-003,4,5) and unchecked for when there is only 1 (SEQ-006)

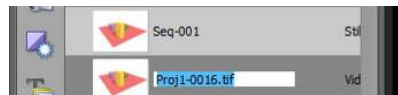
You should end up with something like the image to the right.

You should only have a still image at the beginning and end of the list.

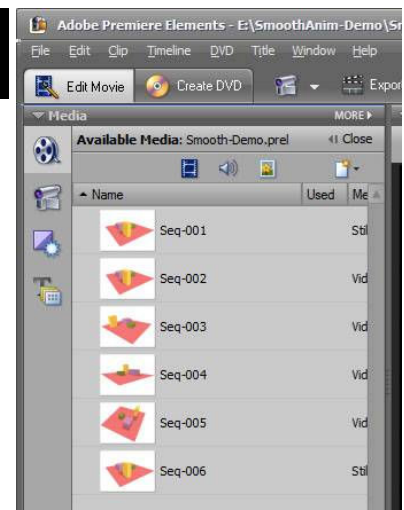


Renaming the Imported Sequences

Optionally you can rename the imported sequences to make them clearer.



Single click on a clip twice and you can give it a new name.



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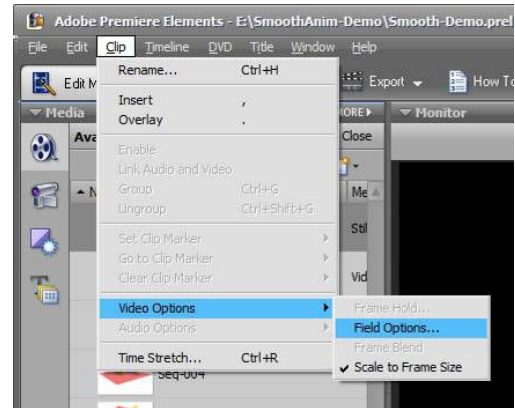
Removing the Flicker

Now for the tedious but most productive part, removing the flicker that can occur with animations from SketchUp.

Select the first clip

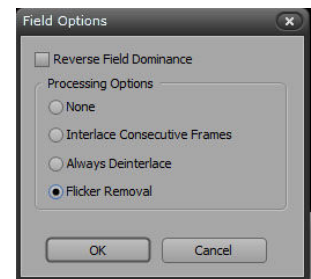
From the menu select *Clip / Video Options / Field Options*.

Its worth checking that *Scale to Frame Size* is ticked at this point as well.



On the resultant dialog make sure that *Flicker Removal* is selected – this is the magic feature (along with the double size export) that makes everything smooth.

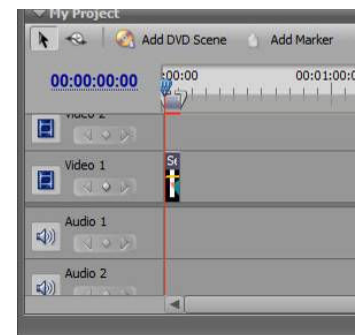
Click OK and repeat the above step for *EACH* clip.



Building the Animation

FINALLY we are ready to start making the animation.

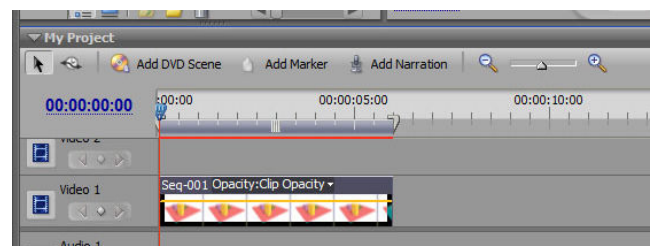
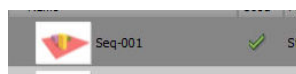
Drag the first clip/sequence (SEQ-001) on to the *timeline* in track *Video 1*



You may want to scale the timeline view to see things clearer.



Clips that are used on the timeline are indicated in the *Available Media* list with a tick.

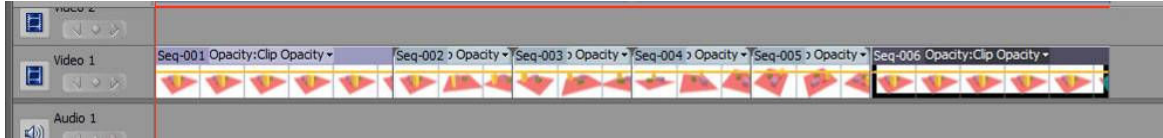


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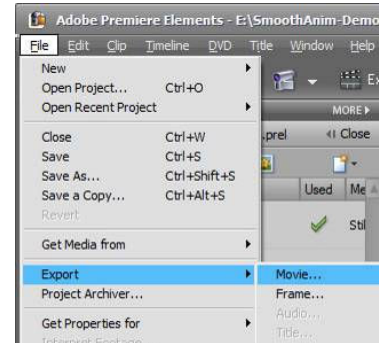
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Drag the remaining clips/sequences on to the timeline so that they follow the first one.

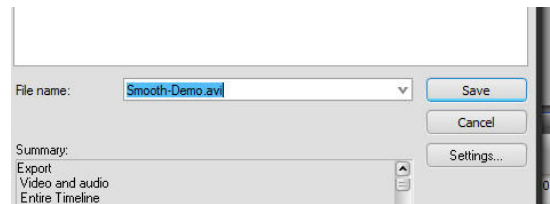


Exporting the Animation

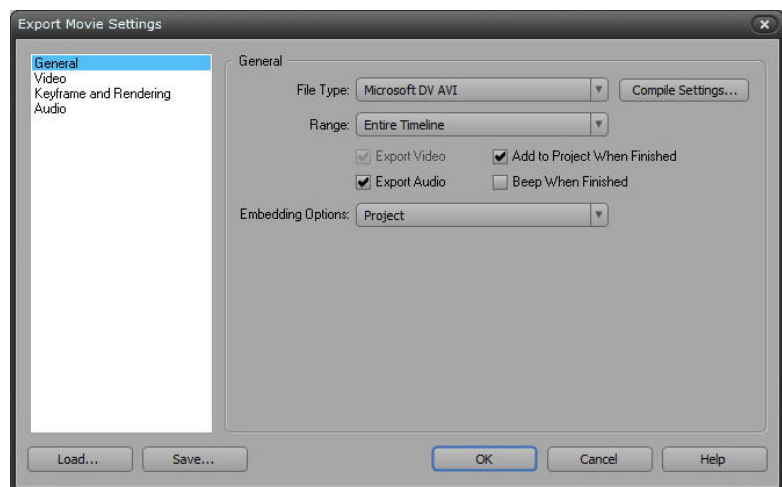
From the *File* menu select *Export* then *Movie*



Type a name you want for the animation and then click the *Settings* Button.



You will be presented with the *Export Movie Settings* Dialog. Premiere assumes that you're a home movie buff and therefore all the settings are for Digital Video (DV). We need to change a few things.



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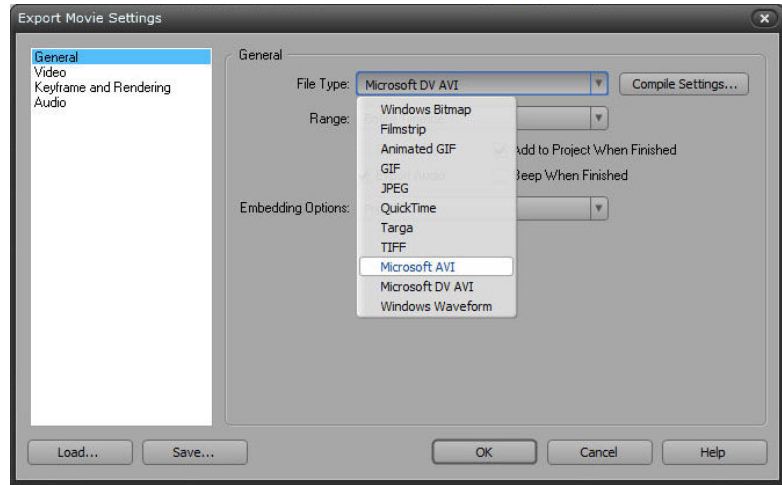
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On the **General** page change the following:

File Type to **Microsoft AVI**

If you've no audio in your movie you can untick **Export Audio**, leave

Range as **Entire Timeline**.

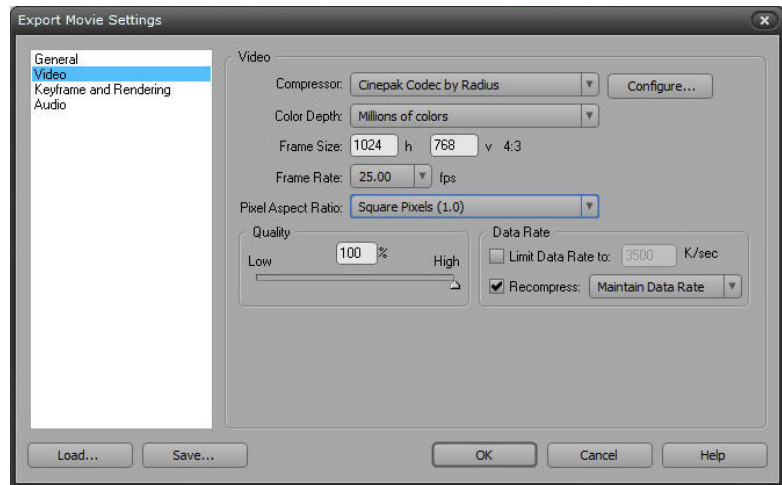


On the **Video** page change the following:

Compressor to **Cinepak Codec**

Frame Size to **1024h 768v (4:3)**

Pixel Aspect Ratio to **Square Pixels (1.0)**



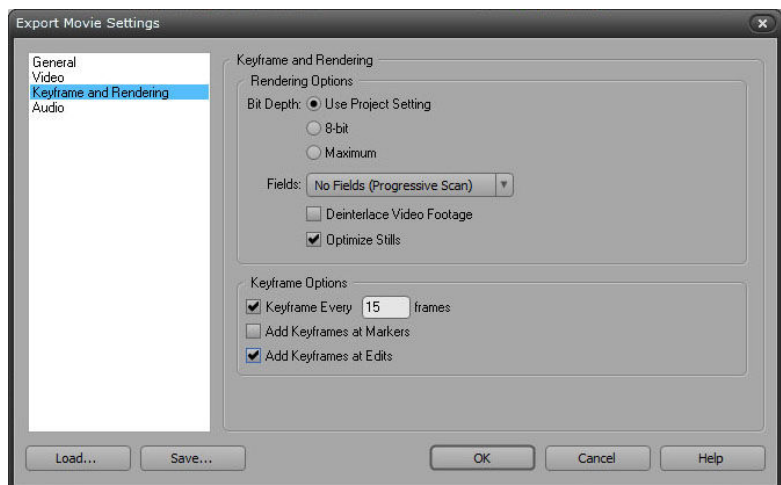
On the **Keyframe and Rendering** change the following:

Fields is set to **No Fields (Progressive Scan)**

Optimize Stills is ticked

Keyframing:

On the dialog to the right you'll see I've set my **Keyframe Every** value to **15**. What this does is ensure that there is a whole frame every 15, the 14 frames between each keyframe are actually only the changes that occur in each image(frame).



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A higher keyframe value will result in a smaller animation but at the cost of quality, a lower value will improve the quality (or more accurately, reduce the chance of low quality) but at the cost of size.

If there is a lot of movement in the animation then a lower value is recommended.

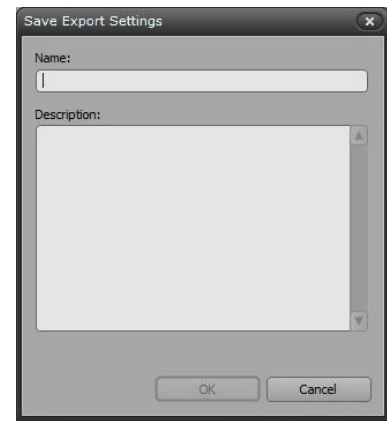
If you had a particularly busy section of an animation you can add markers to the timeline at key points and by ticking [Add Keyframes at Markers](#) in the above dialog, this would reduce the chance of tearing/breakup etc. at those points whilst retaining a higher overall keyframe value.

Basically there is no hard and fast rule for what you set the value to as it depends on animation length, frame size, target medium, required quality etc. but 15 is a good value to start with. I've never really gone below 10 or above 25.

N.B.

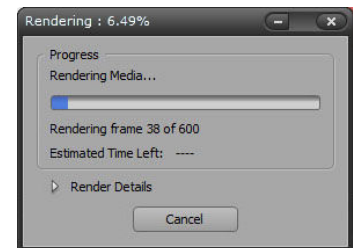
You don't have to do all the above steps again for the next project, you can save all the settings from the [Export Movie Settings](#) dialog, just click the Save button and give it a sensible name, [SU-1024a](#) for example. You can put a brief description in also if you want.

Click [OK](#) to close the [Save Export Settings](#) dialog.



Close the [Export Movie Settings](#) dialog by clicking [OK](#)

Now click [Save](#) and the export will begin, this could take some time, so go and make a coffee.



That's all there is to it, follow these simple instructions and your end result will be a cleaner, crisper and smoother animation.
Good Luck!

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Still to come:

Change duration of still images

Add white matt to beginning

Add Title to beginning

Add ident to entire length of animation

Add white matt to end of anim

Add cross fades

Add Sound

Fade Sound In/Out

Export as Avi

Replace Clips

Reverse Clips

VBS TIFF sorter