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# Installing Susanna

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To install Susanna run the SETUP.EXE you have received.

The installation program will ask where you want to install Susanna. Enter a directory address and press *Enter* or accept the usual Susanna installation directory **c:\susanna** by pressing just *Enter*.

**Note:** if you want to choose your own directory enter only a first level directory address such as *d:\mysus* or *c:\susu*. Do not enter, say, *c:\myfiles\susu* etc..

Please note that although most manual pictures are from Bryce 4 Susanna works also with Bryce 5.

**PLEASE READ THE *ENTIRE* MANUAL. YOU WON'T GET ANYWHERE IF YOU DON'T.**

## Licence

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You are granted a personal, non-transferable and non-exclusive licence to use this program and it's documentation. The program must be used by only one person at one time. A single user can use the program simultaneously on a number of computers so long as no other person uses it at the same time or has access to the other computers where it has been installed. This is to facilitate creating animation with multiple computers.

You may not copy the program or its documentation in any form except to make one backup copy solely for backup purposes or above mentioned situation.

## Disclaimer

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We believe the program performs it duties as described in this manual but we cannot guarantee it to work in any fashion or form with any computer or software configuration. This software is provided as-is without any warranty of any kind, either expressed or implied, including but not limited to the implied warranties of merchantability and fitness for a particular purpose. You assume entire risk as it applies to the quality and performance of the program and documentation. Should the program prove defective you assume the entire cost of all necessary servicing repair or correction.

## Copyright and contact detail

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Susanna is a trademark of  
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## Trademarks

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Poser is a registered trademark of Curious Labs. Bryce 4 is a registered trademark of Corel. All other trademarks belong to their respective owners.

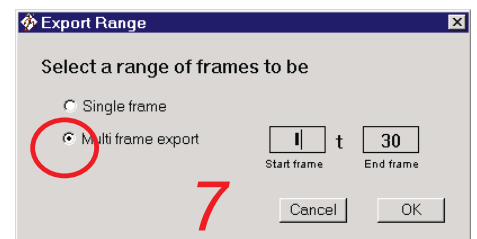
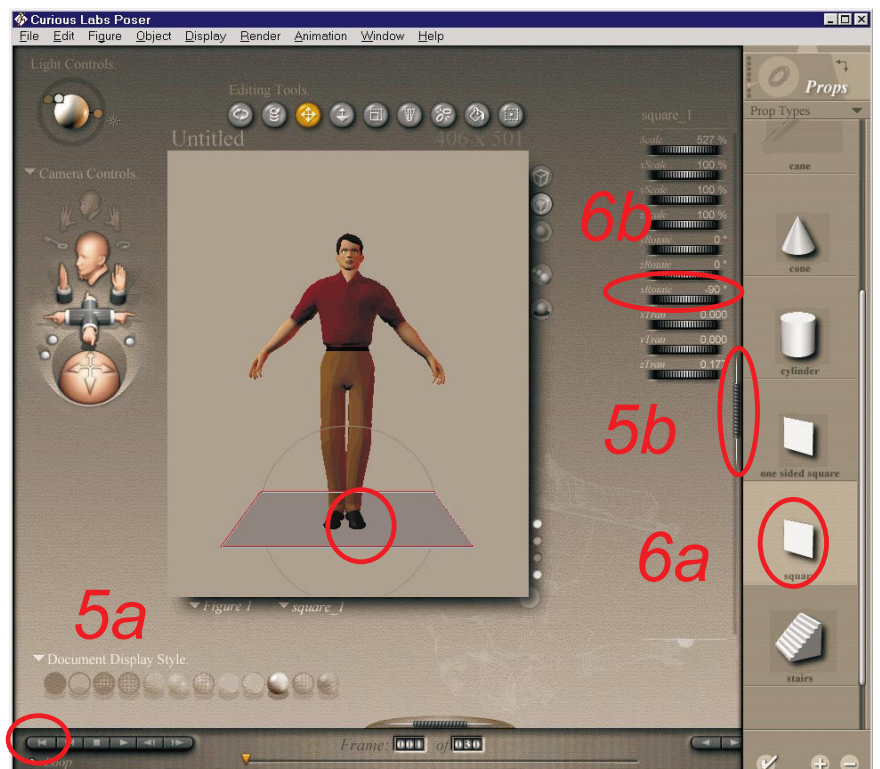
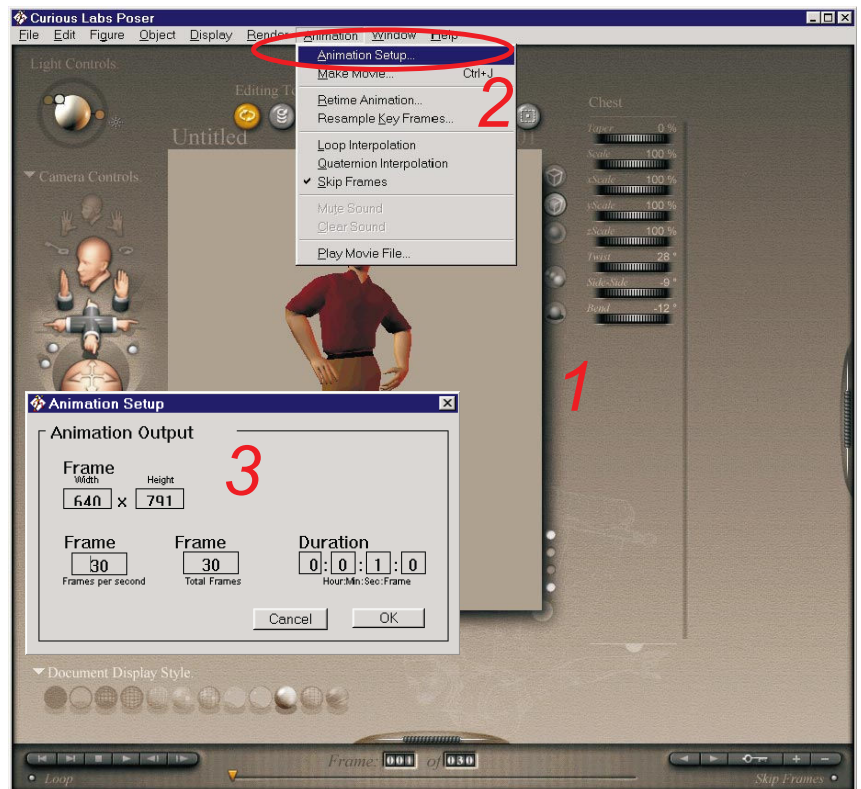
**Thank you for choosing Susanna!**

# Creating a Poser Animation File Sequence

Susanna works with Poser created OBJ animation file sequence. You may also you a compatible OBJ file sequence created by another program. You can also create a multiple character animation in Poser and then export them all to Bryce for rendering.

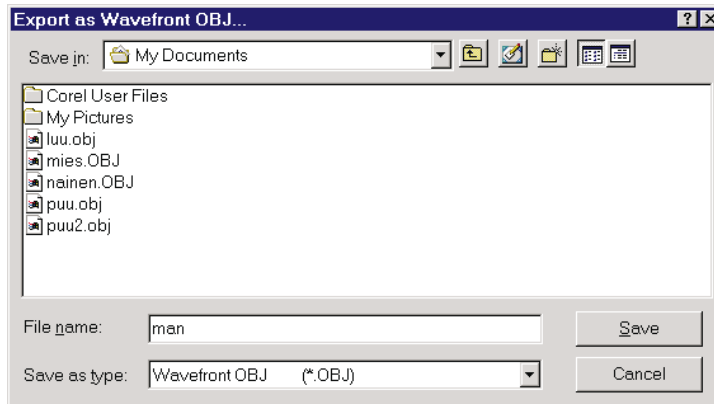
Let's create a simple Poser animation:

1. Start Poser. You get the default figure.
2. Choose *Animation > Animation Setup*.
3. Animation setup window pops up. For starters we'll create a default 30 frame animation. Enter values as shown and press OK.
4. Now pose the figure as desired. Add props and choose materials. Refer to Poser manual how to do this. We advise you to go easy at this point even if you are an experienced poser. There are some helpful and important tips described later in *Poser Animation Tips*.
5. When you are ready go to the first frame (important). You can do this by clicking the vcr-style button on left-bottom corner (5a). Click the handle on the right (5b) and click *Props*. Double click the *Square*.
6. A square appears on the floor, often at the feet of the figure. Rotate it 90 or -90 percent using the xrotate dial. The square may appear to vanish but rest assured it's there. It stays there for the duration of the animation. Do not change it (unless you are creating something special). This square tells Susanna the location of floor when the poser is imported to Bryce. It also tells where the figure is positioned in a Poser scene. It is also important that you create the square when you have included all props and characters in the Poser animation. We'll get back to this later. Also it is important that the square wide enough the "cover" the whole poser even with hands (or if you have an animal tail, fins, flippers, whatever) outstretched.
7. Ok. So far so good. Now that everything is ready choose *File > Export > Wavefront OBJ*. The program will ask the export range. Select *Multiframe export* and press OK.



8. A hierarchy selection windows comes up. Check all items but not ground or universe. If you have paths don't check them. Make sure that you check the square further down in the item tree. If all is fine the square should be the last item in the item tree. Lastly press OK.

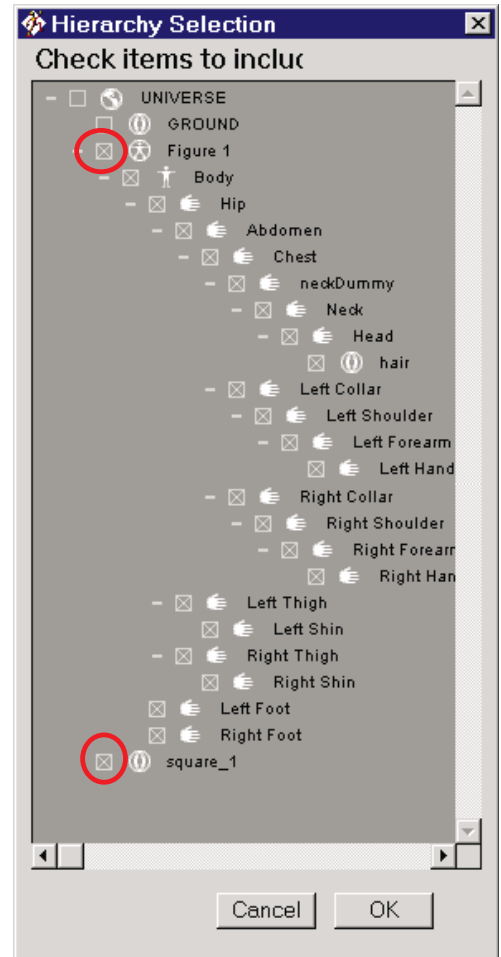
10. Poser now ask the directory and file name. Select a



suitable directory. A good idea is to create a new directory such as **c:\anim** for your poser animation files. For a file name select a short file name such as *man*, *abcd*, *run*, etc. having maximum of four letters. Poser will then make a sequence of files *man\_1.obj*, *man\_2.obj*, etc.. Every file in the resulting file sequence must comply to short file name convention (maximum of eight letters + dot and three more letters) which Susanna uses. So to complete the export press **Save**.

11. Your poser figures may use bump maps, materials, transparencies, textures etc.. A copy of these must be available at the same directory as your poser created animation OBJ files. To make things simple just copy all files in your Poser directory *c:\Poser4\Runtime\Textures\Poser 3 textures* and *c:\Poser4\Runtime\Textures\Poser 4 textures* to your designated Poser animation directory, say, *c:\anim*.

Now you are ready on the Poser side.



# Poser Animation Tips

## Preventing Levitation and going through the floor

If you make your animation by choosing poses from pose menu make sure you're figure is dropped to the floor. Otherwise you get a figure that appears to levitate when animated in Bryce! Many ready-made poses elevate the figure a little. So use the *Figure > Drop to floor* just to make sure.

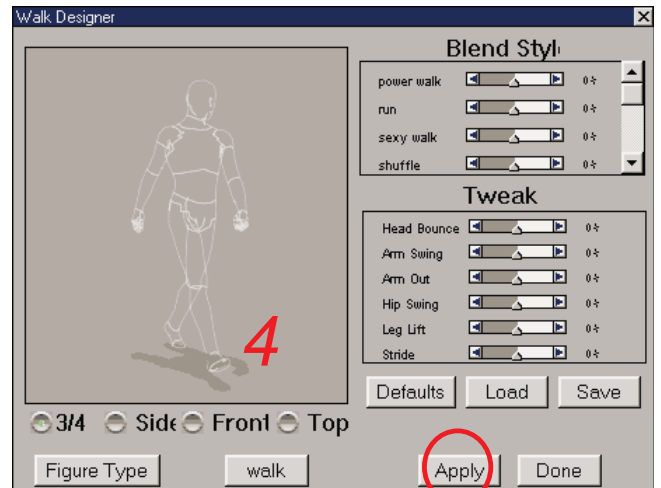
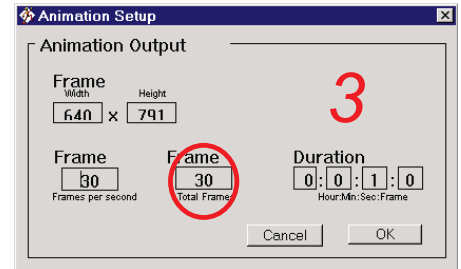
## Walks and runs

If your animations consists of a runs or a walks you don't have to create a path for it. The path is discarded when imported to Bryce.

It is often unnecessary to create a walk sequence lasting more than just one full pair of step: both legs complete a step. Those step can be repeated over and over with Susanna in Bryce. Futhermore Poser often creates an extra frame when it completes a walk or run.

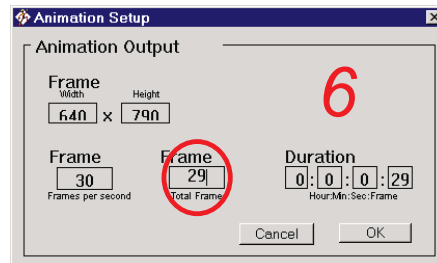
Here's how you create a simple walk that can be repeated ad nauseum:

1. Start Poser. You get the default figure.
2. Choose *Animation > Animation Setup*.
3. Animation setup window pop up. For starters we'll just create a default 30 frame animation (actually a 29 frame) that lasts just one second. Enter values as shown and press **OK**. One second is about the time a person completes a step.
4. Choose *Window > Walk Designer*. A walk designer window pops up. Here you can create different styles of walk and runs. test some styles if you want. For now lets just press *Apply*. Yet another windows comes up.
5. In the WalkApplyDialog window check the options and change values as seen on picture below right. These setting will make a walk a complete walk lasting on step and taking about a second. Move the slider right and left and



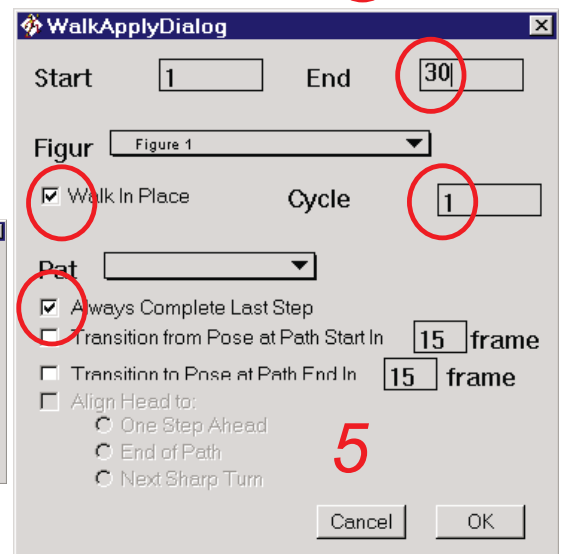
you see how the guy goes about walking.

6. All may seem ok now but before exporting the OBJ sequence of the walk or run you have to delete the last frame, in this case the 30th frame. Why? When you set the *Always Complete Last Step* in picture 5 Poser made the last frame be exactly like frame 1. That's extra so choose *Animation > Animation Setup*. Animation setup window pop up. Change the *Total Frames* to one less, here 29 and press **OK**. Poser asks for a confirmation. Press **Ok**.



7. The walk animation sequence is set correctly now.

Read further instructions how to insert a prop box on previous page (step 6) and complete the export.



# Creating a Bryce Scene

## Creating a simple walk animation

Follow these instructions carefully. They may look long at first but it's just to cover all bases in the Poser-Susanna-Bryce animation process. And relax: many settings are done just once and you can later change most things without changing the animation parameters discussed below.

1. Create the Bryce scene as usual or use an existing file. Be sure to give some animation time for it. Let's put in a girl who runs across the scene. For this you must have created a simple running Poser animation as described

previously in *Poser Animation Tips*. First order of business is to check that your Poser OBJ files are OK. To check that import one OBJ file to your scene. From the Bryce menu choose *File > Import Object* and then choose the appropriate directory where the animation files reside. The OBJ figure mesh (as they are called) comes to the scene. Note the square at her feet. It's the "floor" cue for Susanna.

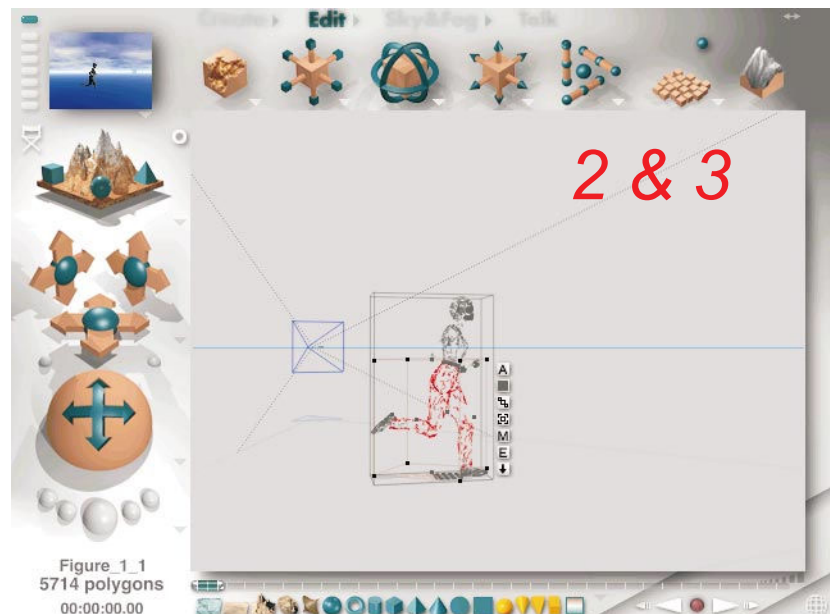
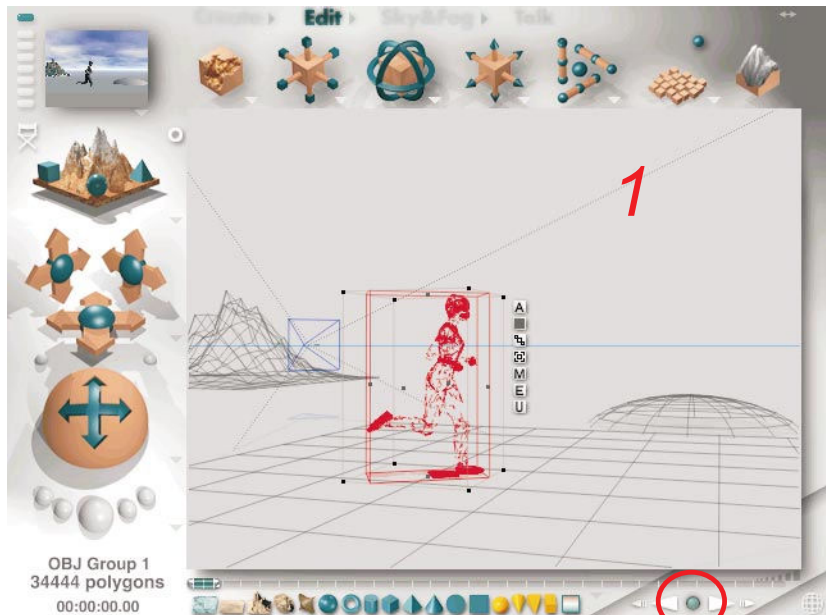
At this point Bryce should import the figure without asking for the texture files you may have used with the Poser figure. This is very important! If Bryce cannot find the texture, bump maps etc. right away on the same directory as the OBJ files Susanna will fail. To

make things simple just copy all files in your Poser directory *c:\Poser4\Runtime\Textures\Poser 3 textures* and *c:\Poser4\Runtime\Textures\Poser 4 textures* to your designated Poser animation directory, the directory where you have all the OBJ files of your animation.

2. Ok so your Poser figure came in with all the textures and materials. Often they are slightly off base and you have to adjust them to look good. Let's say we like the runner but Ambience and Diffusion must be tweaked. We also want her hair to use a Bryce material. For easier selection select the figure and press the Solo button. The button turns red and everything except the runner and perhaps the camera disappear. Now adjust the materials to your liking. Make some part use Poser textures, other parts like the hair use a Bryce material.

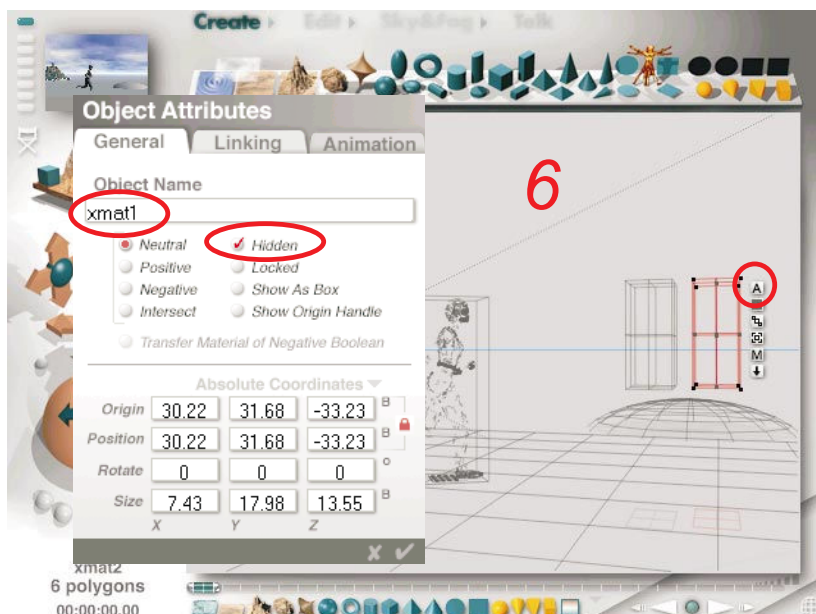
3. Now comes the part where you have to be very accurate. The solo mode being on press the *Tab* key. If you are using the Director's view the camera should be selected with the first *Tab*. I so press *Tab* again to get the first

item in the figure. Most often this is the square at the figures feet. When you have the very first item selected start tabbing more. After each *Tab* make a note of the order of "parts" in the figure: The square is the first, trousers are second, belt is third, ..., flesh is sixth, ... and hair last at 19th position. Susanna needs to know these numbers and you'll give them her them later.



4. Now that the part ordering in the figure is done press the solo button to get the normal mode back on. In this example we want basically two materials 1) the poser figure materials with ambience and diffusion tweaked, and 2) the hair material. Now create two new boxes (see picture 6). They will be the placeholders of those materials that Susanna will use on the imported Poser figures. They can be situated anywhere and won't show up in the Bryce animation unless you want them to.

By the way: the materials boxes must be the last objects in the scene. Otherwise Susanna will complain. We'll get back on this at paragraph 12 later.



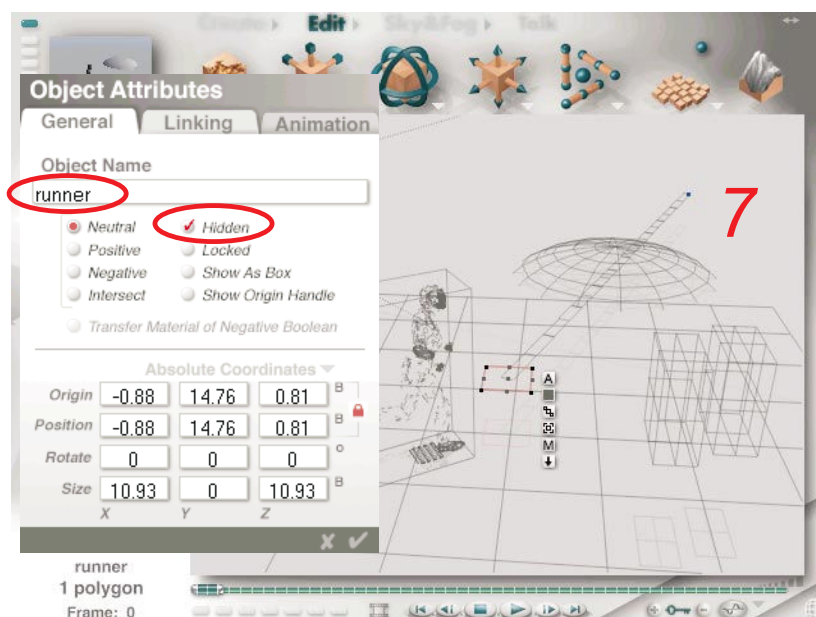
5. Now select again the Poser figure and go into solo mode (press the solo button so it turn red). Tab once again a few times until you get to the flesh part. The flesh selected press Ctrl+Alt+C or select copy material from Bryce drop down menu *Edit > Copy Material*. The material is copied into Bryce memory. Select solo mode off and select the first of the new boxes. It selected press Ctrl+Alt+V or select from Bryce drop down menu *Edit > Copy Material*. The first box will now have the same material as the flesh. Most often the material is the whole texture & bump map for the Poser figure, shoes, belt, etc. not just the flesh.

You probably guess that now you have to repeat the same procedure for the hair. Well, no since we want hair to have a brand new Bryce material. So select the second "material box" and select any material from Bryce's material lab by pressing the "M" button.

6. When both materials are set make them hidden. Press the "A" button next to the box and check Hidden on. Don't check anything else. Give both materials a name *xmat1* for flesh and *xmat2* for hair. The name has to start with *xmat* for Susanna to know that this is a Poser material copy. Don't do any Linking or Animation changes here. Do not use any commas, empty spaces, etc.; use just simple namers with letter from A-Z and numbers. The size and placement are not important as they will not be used for anything.

If you want to animate the material please do so in the material lab as described in Bryce manuals. After you get used to Susanna you'll find again the fantastic potential of Bryce's material capabilities. These all can be used with Poser imported animation! Horror movie aficionados may want to experiment how to create apparitions and how to make vampires decompose to dust.

7. Now with the material set we don't need the Poser figure so delete it. You may want to save the file should you want return to these settings afterwards. Now you need to create a placeholder for the runner and a trajectory for it. Create a 2d face (a square).



Actually any Bryce primitive will do but it's thickness (size Y) has to zero. Give the square an unique name, we've used "runner". The name should only consist of letter A-Z and numbers. Don't use commas, spaces, punctuation, etc. yada, yada, yada! Also make the square hidden.

8. Now you should make the animation trajectories for the square, our Poser placeholder.

When creating walk trajectories make the box hover somewhat above ground. Susanna will adjust the trajectory so that it will follow contours of the ground. If your ground is flat then forget that: you can land it there yourself -this will speed animation somewhat.

These instruction have explained how to create one object with distinct materials and animation. Susanna allows of course for you to create as many characters as your Bryce can handle. With 128MB we've found that even 50 characters work.

You can also have multiple Poser figures in one OBJ file sequence. It is easier to create the animation part (shaking hands, sword duels, etc.) in Poser.

When creating animations such as walks or runs timing is paramount. How far in Bryce world does your Poser figure walk in ten seconds? If too much distance is covered the ground slides as the Poser figure runs or walks. Too short a distance makes the walker/runner slip all the way! Experimentation and testing is needed as well as careful planning

9. Most things are set at Bryce side so AT LAST we get to start the Susanna program you paid your hard earned cash for. Since Bryce takes up most screen real estate minimize Bryce for a moment and double click the Susanna icon.

Then restore Bryce. Susanna is an "always on top window" so Bryce won't cover it. The first order of business is to create a new "project" for our simple walk. At this point the Susanna main screen may say *Can't find all Bryce Windows*, but don't worry about that for the time being (Bryce needs to be in default window size before Susanna can work).

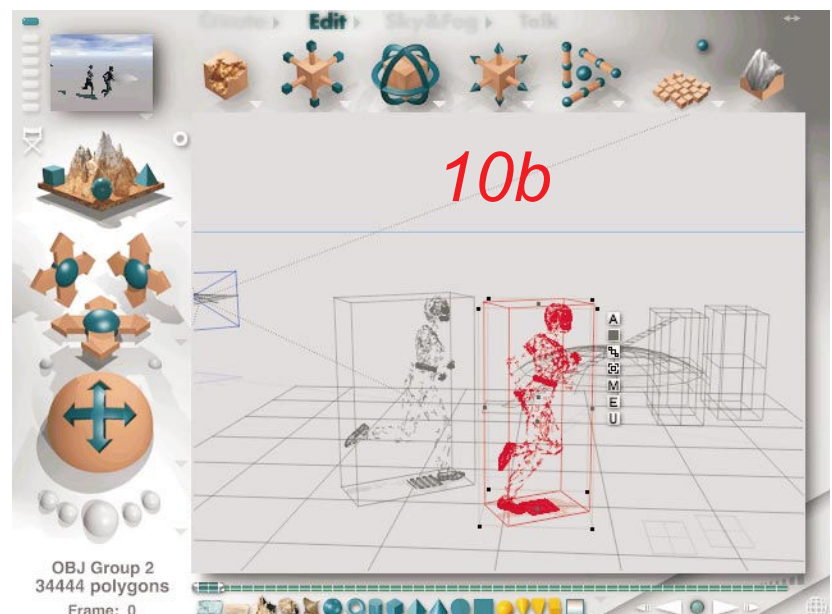
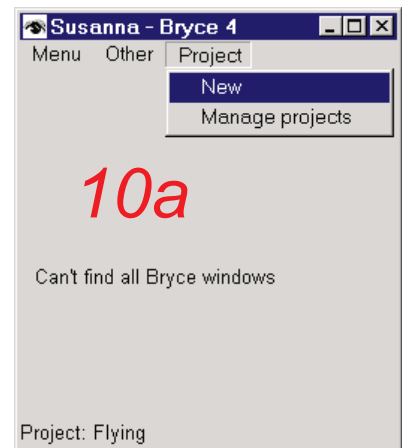
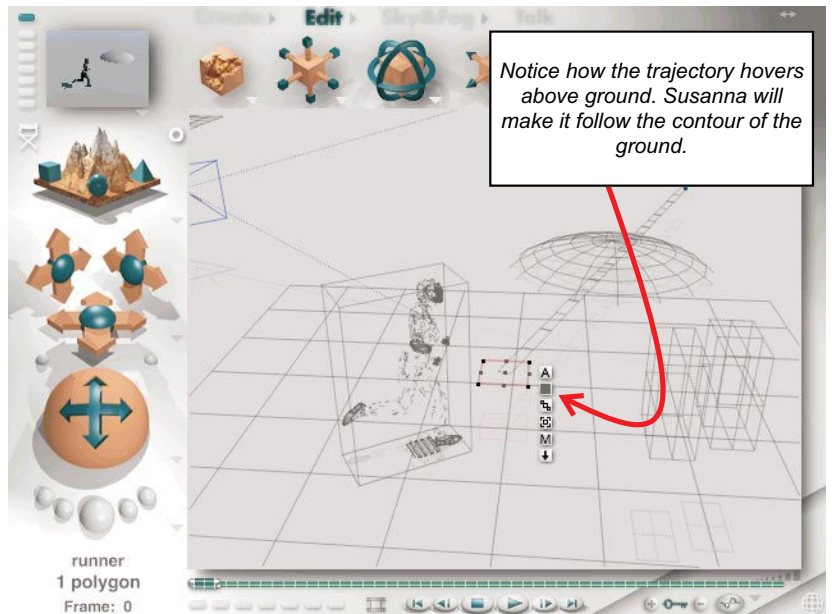
10. From the Susanna window choose *Project > New*. A dialog box comes up and give a new project name, say, *running* and press OK. Then choose *Menu > Do Bryce Animation*. *Window Animation setup* comes up. In the windows you have many edit field that are discussed below. Note that Susanna uses the Enter -key to move from next field. Down Arrow and Up Arrow work also but Tab will not work. We like it that way!

*Start/end frame in Bryce*

Enter **0** and **9999** to these fields. This tells Susanna that the runner will appear throughout the animation (unless you are doing a *very* long shot of over 9999 frames). If you put, say, 10 and 20 the runner would suddenly appear at frame 10 and just as suddenly disappear after the 20th frame.

*Import OBJ name*

here you put the name of the object file sequence you created and exported with Poser. Recall from chapter *Creating a Poser File Animation Sequence* section 10 the file name you used in export. Let's say your file sequence is named *run\_1.obj*, *run\_2.obj*, *run\_3.obj* etc.. In this case put **run\*.obj** to this field. The



“\*” is important because it tells Susanna that you have a file sequence with many files. You can use the “F” button to select the file.

#### *OBJ center position*

This tells Susanna where the “square” is in the imported figure. Often it is the first so put **1** here.

#### *Initial frame*

Put **0** (zero) here. This tells Susanna use the first available obj file of the file sequence. So the first imported OBJ would be run\_0.obj. Should you put, say, 4 Susanna would import from run\_4.obj onwards. This parameter comes handy when you have two runners using the same animation file but both running at different order. Take a look at picture 10b.

#### *OBJ follow parent object*

The parent object is the box size 10 you created and made a trajectory for. Since it was named *runner* put **runner** in this field.

#### *OBJ use material from object*

Here you should tell which parts of the object use which material. The entire object will use the material in box named *xmat1* and hair will use the material from *xmat2*. So put in **0-xmat1, 19-xmat2**. The numbers correspond to the order of appearance of parts in the imported figure. 0 means the whole object, 1 is often the cue square, hair comes often last. It is also important that you should give the whole object material first and other parts after it. Don't forget the comma between and “-”-separator. You can enter as many settings that fit in the field (it's a rather long field). Different parts can use same materials. If you leave this field empty Susanna will use the figure material as it is imported to Bryce. For simply textured figures such as skeletons it is often sufficient.

#### *Drop levels*

This tells Susanna whether you want the figure trajectory to conform to ground below. If you have a walker or runner put **1** here. If you have a superhero flying across the sky leave it to zero. If your trajectory already is following the ground set this to zero as it will speed up animation.

#### *Keep on repeating object*

This is default at the moment. What it means that even if you have Poser object file sequence of just 30 moves worth of one second but your Bryce animation requires to have a ten second walk Susanna will repeat and repeat the file sequence for those 10 seconds.

#### *“Save” and “Open” dialog names*

Susanna needs to know the window titles for the common dialog windows. If you have an english language windows version leave these fields to **Save as** and **Open**. Otherwise put in your own language equivalents.

#### *Render height & width in pixels*

Susanna makes use of most of the setting in Bryce's settings but these two must give.

#### *Render frames*

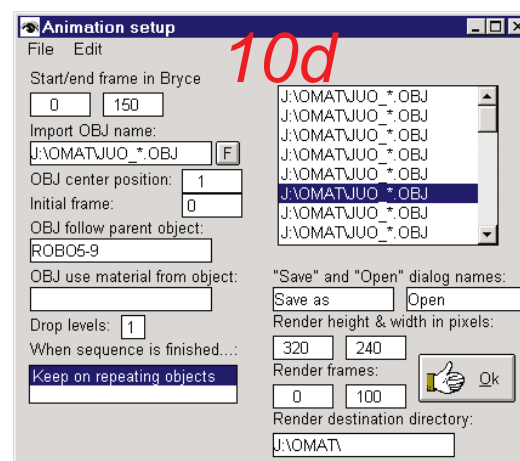
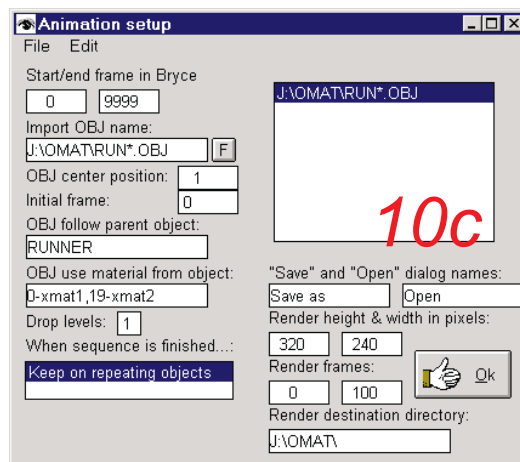
This tells Susanna which animation frames you want to render. If you are doing a 100 frame animation put **0** and **100**. If you are creating a long animation you can break the animation in parts. Maybe even use multiple computers to render parts to save overall time.

Susanna makes Bryce render the animation to a bmp file sequence - not an AVI file. You can later recompile the individual BMP files to an AVI movie using your favourite AVI/Mpeg compiler. Adobe Premiere and just about any movie editing package have this feature. Internet has numerous free utilities for this purpose. The BMP files sequence is saved as A0.BMP, A1.BMP, A2.BMP, ... etc. to the directory where your Poser generated OBJ files exist.

#### *Render destination directory*

The directory where the BMP files will be generated.

The *Animation set up* window has File and Edit drop-down menus. The File menu is used to manipulate project setting. Better leave it unused until you become familiar with with all features. Edit menu is useful. With it you can copy all fields visible, add a new item and paste fields to the new item. The listbox on top right lists all existing items. In this example we have just one, but in other project you may have numerous items these. Clicking on the list gets the item details to the window fields.



Next follow some more detailed discussion on other option if you're in a hurry skip directly to paragraph 11.

Take a look at picture 10d of an animation of 45 skeletons and how they have been set up. Notice the listbox has many items. Notice that all the items use the same OBJ file sequence JUO\*.OBJ in another directory. Also take a look at the Bryce file (10e). Notice that it has just four squares. Where are the 41 other squares? Well, in Susanna you can make some object repeat at a different place. Take again look at picture 10d. Notice that *OBJ follow parent object* is ROBO5-9. That means that this particular item does not have it's own square but rather uses the trajectory of ROBO5 box nine frames behind. You can have either behind (-) or in front (+). If there is no frame behind nothing will show up.

11. Whew ... was that a long description. Sure hope you read it. Okay. Now is the time to move on. Press *Esc*. We won't continue just yet. You must first save your Bryce file! During rendering Susanna will alter the Bryce scene so you must be able to return to current state if you want to make changes or something got messed up.

While Susanna is forgiving for many errors she just won't work with wrong data. For example if you have named the box as *runner* but in the Animations setup windows it is *runer* nothing good will happen! So double check spelling and other details again.

12. Here are some do and don't of working with Susanna.

#### Material boxes

They must be hidden and named. They must not be grouped since Susanna polls their values during the animation! They must be the last objects in the Bryce scene. It is often good practise the make them into a family so you can select all of them easier. There's a tip on making them last easier and some caveats in next chapter **Bryce Animation Tips**.

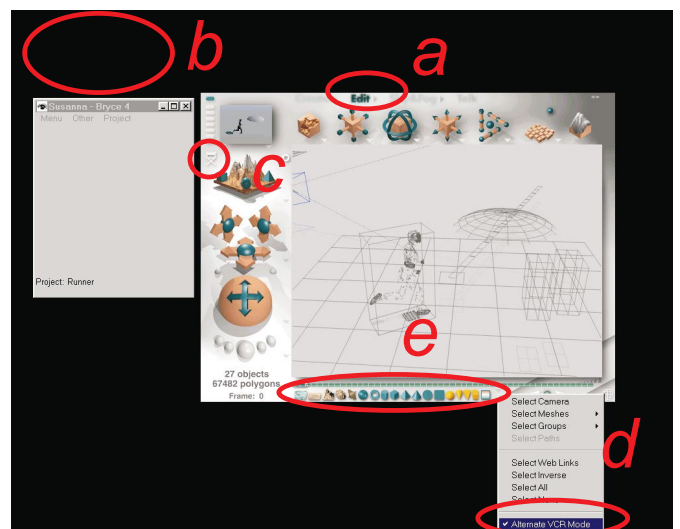
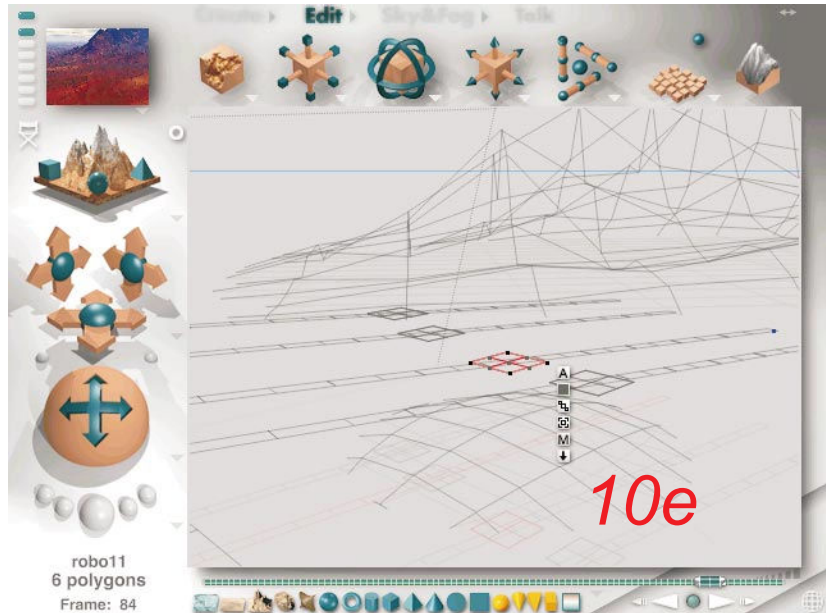
#### Poser squares

They must be hidden and their thickness must be set to 0. They must not be grouped or locked.

#### General Bryce appearance

For the duration of the animation Bryce must be set to default document setup. So choose *File > Document setup* click *Default* on top right and press the check on bottom right. This is very important.

- a) the Edit mode must be on
- b) an empty space must exist above Susanna window. Susanna uses this space for mouse clicks that set focus on Bryce.
- c) Susanna window must not be over camera/director and generally not over the Bryce workspace.
- d) the *Alternate VCR mode* must be on.



e) the Object Selection palette must be on (*not* Time selection palette).

Susanna relies on many things while rendering goes on:

a) don't run other program that could interfere with program execution. Screen savers and virus detection program will slow and hinder program execution unnecessarily. The Bryce view should clear of any other popup windows except Susanna's main window.

b) Bryce nano-view auto-update should be set off. If set on problems & render times will be multiplied. So set it off.

c) General Windows appearance must be "standard". That means that Windows taskbar (taskbar is the one with "Start" button) must be at the bottom of the screen and not up or at sides.

13. Now we can really try out the animation. Click some object in Bryce scene and then in Susanna choose *Menu > Try to find Bryce*. The annoying message *Can't find all Bryce Windows* should disappear. Then choose *Menu > Do Bryce Animation*. *Window Animation setup* comes up. If this is your first try go easy and put **0** and **5** to *Render frames* and Press OK. We'll render just six frames (0-5).

A list comes up. Choose *Re-calculate path settings* and press OK (the list items are discussed in *Bryce Animation Tips*). Susanna will now gather data where everything is and should be during the animation. The animation will be run without Poser figures but hang in there. Then a new prompt comes up: press OK.

**Yess!!!** Now the the funny part begins. The screen changes, menus pop up and go off. It's just Susanna pressing buttons, selecting menus like a phantom gotten loose on your keyboard. But if all goes well you will notice that an animation is really happening.

**Bummer!!!** If all goes to a fine mess blame it on this being the 13th paragraph. No really, something must be wrong with data given to Susanna's dialogs. If Susanna appears to get stuck press Ctrl+Alt+Del and shut down Susanna the Windows time honored hard way. Luckily Susanna can be interrupted in this unsavorily way without the program or data getting too much mucked up. Then you can revert to a previously saved Bryce scene and try again with correct data this time around. Why anything like this should happen? Read about it in next chapter *How to minimize problems*.

When the dust has settled and animation appears to have gone OK and finished you should have a nice selection of BMP files a0.bmp, a1.bmp, a2.bmp and so on in the render destination directory. Then use your favourite AVI/Mpeg or whatever program to compile them to a full-fledged movie which will be the envy of George Lucas et al!

# Bryce Animation Tips & Techniques

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## Object trajectories

---

A trajectory is a list of saved positions of you animated Poser figures. Before an animation can begin Susanna retrieves each square position where it is located during the animation timeline.

You can edit manually the trajectory locations by choosing from Susanna main window *Other > Edit Susanna table > Current path table*. A spreadsheet comes up where you can edit individual points.

### Walking through a fog

When creating walker animation you often use the feature “Drop to ground” (you set *Drop levels* to 1 in *Animation setup* window). But if you put a fog sphere just over the ground the walker walks on the fog sphere not through it. There is an easy solution: create the scene with out fog spheres. Then let Susanna recalculate all trajectories. When that is done and program asks if you want to continue answer no. Then make any changes such as adding fog elements etc. and save the Bryce file and do the animation again. When Susanna asks if you want to recalculate all paths select *Use current trajectory setting*. Susanna will then animate with trajectories that go right through any obstacles.

## Poser figure placeholder, the “square”

---

A Bryce scene has to have square (thickness Y 0) for all the Poser figures that are imported. You can just as well use a flat circle but it is often easier to see which way a square is pointing. Susanna keeps a list of all of them. You can manipulate the list in *Animation setup* window. You can also edit them in a spreadsheet. Choose from Susanna main window *Other > Edit Susanna table > Current object table*.

## Material boxes

---

These hold the material information for Poser figures and their parts. The material boxes should not be locked or grouped but it is often good practise to make them into a family for easier selection.

Another good practise is to put them neatly next each other and name them consecutively xmat, xmat2, xmat3, etc. The name must have an “xmat” name.

They must be the last objects in the scene. If you’ve added other objects after creating the material boxes do this:

- 1) Select all material boxes (a couple of clicks if they are a family -but don’t use a group!).
- 2) Press *Ctrl+C* to copy them into Bryce’s memory (don’t do a duplicate operation -it’s often messier)
- 3) Delete the selection by pressing *Del!* They are gone now (but not forgotten).
- 4) Paste the selection by pressing *Ctrl+V*. The boxes come back. They are now the last or newest objects in the Bryce scene. By the way the copy and paste have menu equivalents in Bryce hidden top drop-down menu.
- 5) All is well now but there one glitch or should we say feature in Bryce. When you copy and paste (or duplicate) items Bryce re-names them. So if your material boxes were named xmat1, xmat2 and xmat3 now they are named xmat2, xmat3 and xmat4. Bryce has re-named them and messed things up! Be sure to give the boxes their old names xmat1, xmat2 and xmat3 or whatever they were.

## How do I delete and otherwise manipulate projects

---

From Susanna main window choose *Project > Manage projects*. A spreadsheet comes up. You can change the names, delete project (press *Del* on the project) and select projects. When you exit the table Susanna will ask if you want to select this project.

The project table has also filenames which you should not edit. These refer to project path table and object table files.

## I want to cancel an on-going animation, how do I stop it?

---

Wait until next Bryce rendering dialog comes up. Then press the “X”, cancel button and cancel the operation. You can also press *Esc*. Wait a few seconds until Susanna reports that animation as been interrupted and press *OK* a couple of times.

If all appears stuck just press Ctrl+Alt+Del to cancel Susanna altogether.

## How to minimize problems & speed up animation

Here are some tips which help Susanna in making an animation:

### Apply the usual Bryce rendering tips

These include turn off nano view autoupdate. Also make sure no unnecessary other programs are running (virus checkers etc.).

**Note!** Sometimes Bryce goes into a non-responsive mode when you use another program in the foreground such as Susanna. Bryce looks OK and appears to have focus but won't accept keyboard entry (tabs, Ctrl+Alt+E, etc.). This will prevent Susanna from working. To avoid this situation just prior to starting Susanna rendering (when you are still in the *Re-calculate all trajectories* window) click some object in your Bryce scene. Then press Tab with out keyboard a couple of times. Bryce should select next object with each Tab press. Bryce should now be out of the non-responsive mode and you can continue with Susanna operation.

### Group and lock objects

If you have a huge Bryce scene with hundreds of objects group and lock those that are not connected to the square figure placeholders. Don't group or lock the Bryce square placeholder, nor the material boxes. Remember that even though other objects are grouped and locked Bryce still applies all own animation changes on them. Grouping and locking just makes it harder for you to accidentally delete or move the object. Furthermore before Susanna starts the animation process it cycles through every object in the scene. Having five "free" objects and perhaps one humongous group with hundreds of objects takes a lot less time to go through.

### Have plenty of free disk space

Free disk space helps and keeping your disk tidy by running de-fragmentation programs on a regular basis.

### Leave keyboard and mouse free

For the duration of animation don't use the keyboard or move mouse around. Susanna uses keyboard and mouse herself during the animation.

### Turn off screen savers

Susanna relies that Bryce menus stay on on during the entire rendering process. If you leave your computer running for a long time turn off monitor to prevent screen burn.

### When things go wrong restart Windows and Bryce

If Bryce hangs Susanna will go down with it. Often hung jobs can be run with better luck restarting Windows afresh. Then check which frames went ok and continue rendering job from next frame.

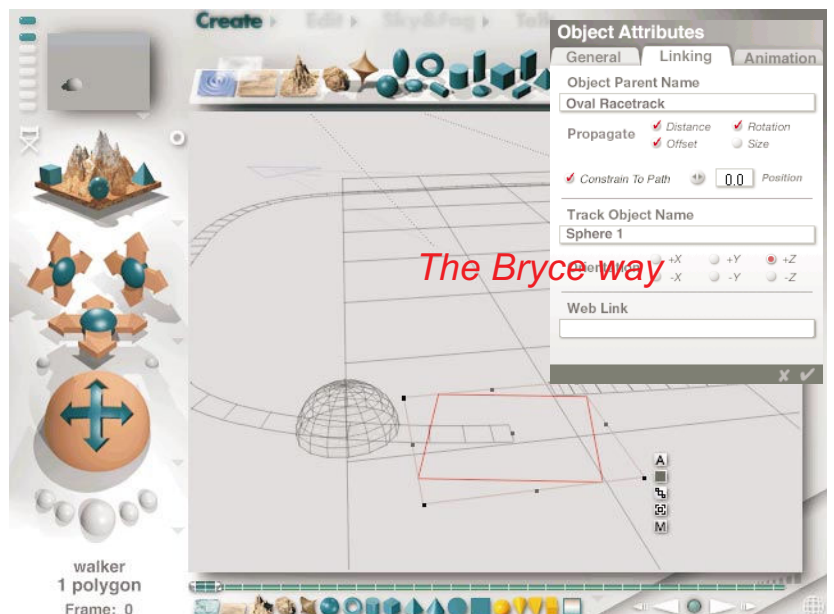
## How Do I make My Poser Walk a Winding Path

### The Bryce Way

Link your square to a path object. Link also a sphere to the same path object. Then make the square track the ball. You square can be constrained to the path or linked a hidden object which is constrained to the path. The latter way is often easier to handle.

At the beginning of the animation timeline the sphere should be constrained to 5% of the path position. The square should be at 0%.

At the end of the animation timeline the sphere should be constrained to 100% of the path position. The square should be at 95%.



This way the sphere is always leading the square.

### The Poser Way

Create a winding path in Poser. Also create the square. Make your poser walk the path it and export the OBJ file sequence. In Bryce the Bryce square placeholder should remain still since the OBJ animation file sequence already contain a winding walk.

## I've imported two Poser figures for animation but their sizes don't match in Bryce

---

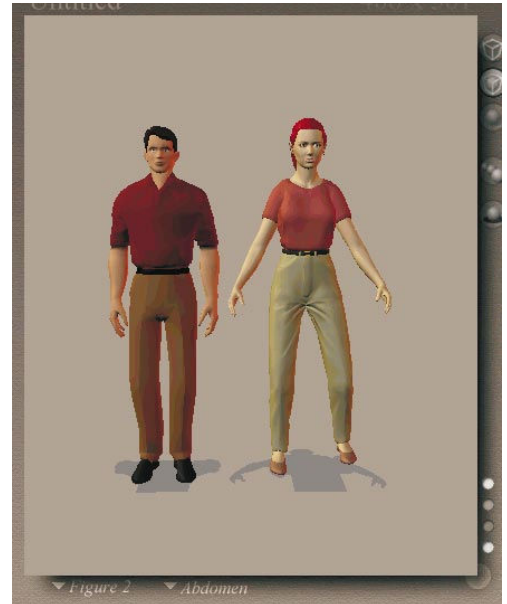
Create and size both posers in Poser in the same scene. Let them have both their own squares. Export them individually (check only the relevant poser and square in export item list).

For example there is a low-res male and a hi-rez female in the picture on the right. If they were in separate poser scenes they would import to Bryce as midget-man and 7 ft she-woman!

## Can I use some other file prefix for animation sequence files; other than "A"

---

Sure. When you are in the *Animation setup* window select *Other* -dropdown menu and *File sequence prefix*. Enter any letter from A to Z.



# Creating a 2D picture that shows another animation

Among other graphics primitives like box, sphere, etc. Bryce has a flat square where you can add a picture. Unfortunately there is no simple way to put another animation there, just a static bitmap. With Susanna this is possible however. You can have up to 30 "movie screen". Here's how.

1) Create a Bryce scene with Poser figure placeholder. what is different from usual squares is that this time around the square is a 2D Picture object (a "leo") and it is not set to hidden. You should create these object as first objects that have a bitmap texture or bumpmap. Also assign some BMP file to each 2D picture object. It does not matter which BMP since another will be used at render time. Take a look at picture 4 on this page. Our scene on left has 4 "movie screen", three are flat 2d object and the "Robo5:x" is a cube object. They have all been assigned a unique bitmap. The Robo5:x the bit map is a material texture. If you use a material texture you should have ":X" attached to it's name in Bryce and in Susanna.

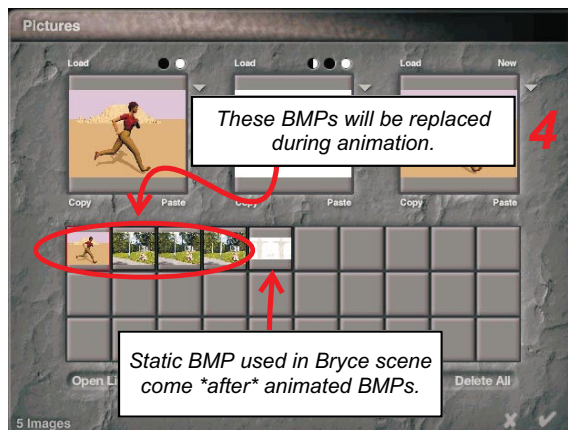
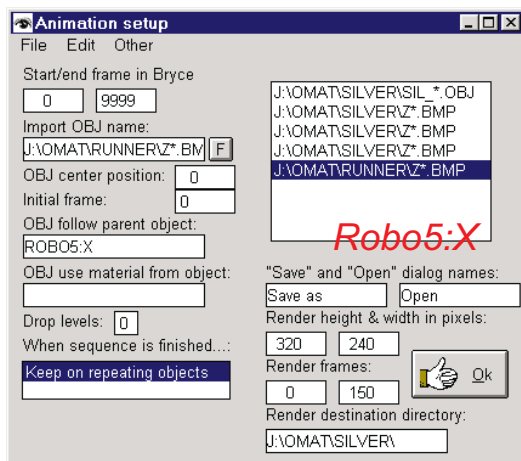
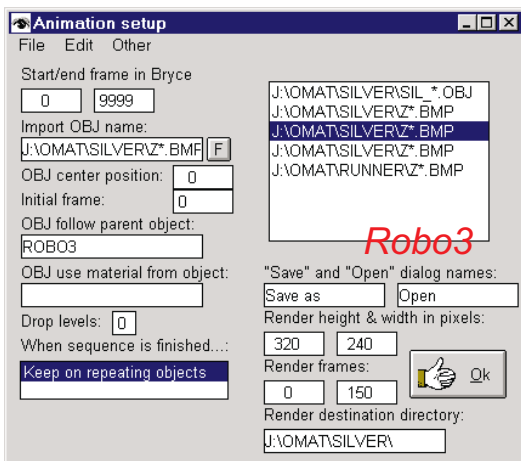
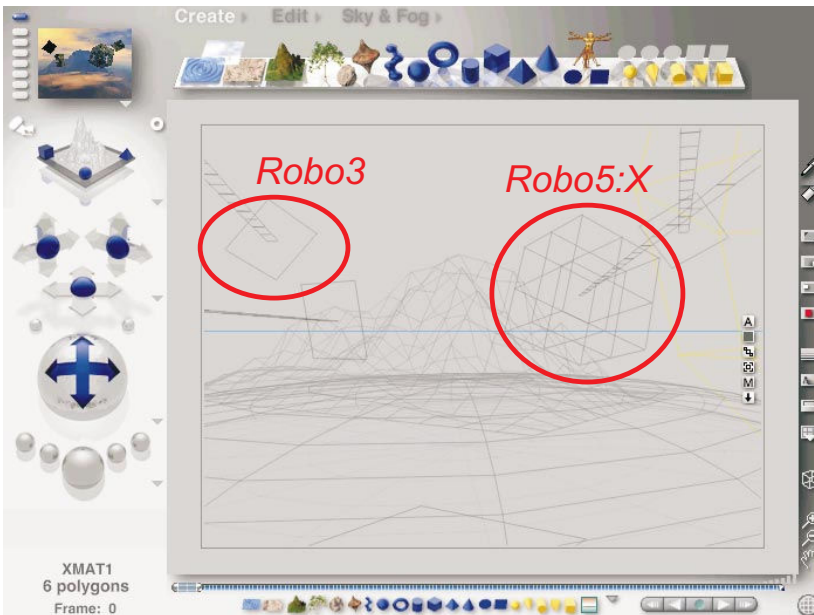
2) When you set item details at *Animation setup* window in Susanna these fields have special meaning:  
*Import OBJ name*

Here put a name of you animation BMP file sequence. Pretty much like you set OBJ file sequences. In this example a BMP animations sequence of files B0.BMP, B1.BMP, B2.BMP, .. etc. exists on directory J:\OMAT\SILVER. These are played of the 2D faces.

*OBJ Center position*

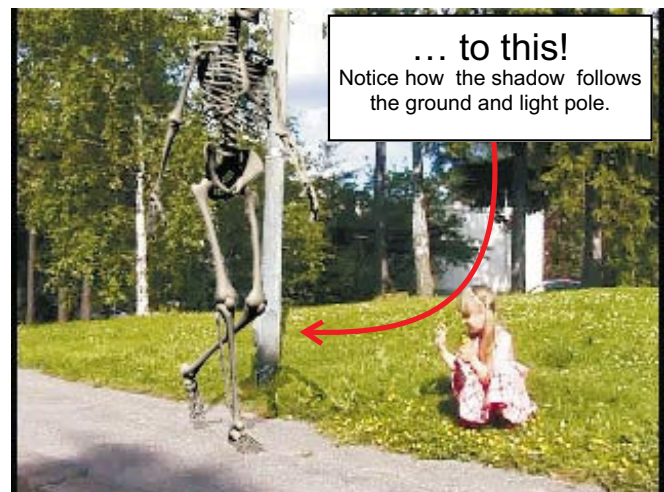
Since a 2D picture object is just one piece put zero here allways. Other input fields behave similarly to regular OBJs. You can use materials to set special effects, but most often materials are not used.

If you want to have static 2D picture objects in addition to animated ones you must define them like they were animation placeholders: the animation BMP file sequence simply have just one file. This is because Susanna takes over 2D picture file handling from Bryce at runtime.



# Importing Bryce and Poser animations to real life movie footage

A sample explains best how you can do ...



1) Import your digital or analog video to your computer. To get best results you should use good quality digital video. If your footage is grainy or has artefacts the combined Bryce/Poser/Video will not look premium. Also digital/analog video often has interlacing. You can minimize this using de-interlacing by a number of utilities such as Avery Lee's fine VirtualDub program.

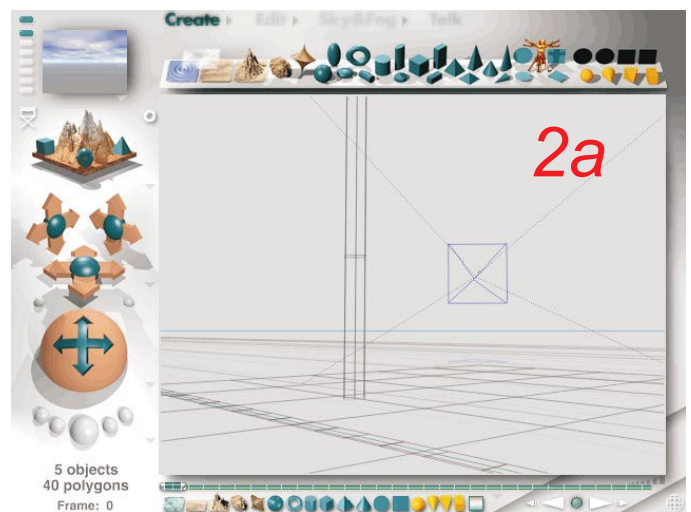
Also your AVI/Mpeg etc. video should be exported to a BMP file sequence. There are many commercial programs and free utilities on the net that can convert your AVI a series of BMP files and vice versa. So you should convert your AVI movie to a series of 24 bit BMP files P0.BMP, P1.BMP, P2.BMP. It is important that the BMP files are "24 bit" or 16.7 million colors as Bryce and Susanna use this color format.

Above video (btw. that's the real-life Susanna) has been shot with a stationary DV camera. The camera does not move or pan to make things easier.

2) Create a Bryce scene with the square plate and all as described earlier in this Susanna manual. Make sunlight and other light sources mimic the actual video. Position the camera or directors view so that the view mimics the real video. What is different is that just about every other object in is colored bland white.. A stretched cube represents the grey light pole, a ground plane is the pavement and a squashed cylinder mimics the grassy knoll (*grassy knoll?* now where did I hear that hmm??). All have been set so that when rendered a blank white picture appears. Use the material editor and set Ambience and Diffusion so that all shadows and form appear totally white (figure 2b).

The whole Bryce scene is actually set to cater to the skeletons shadow. When the skeleton walks past the pole it's shadow should reflect as realistically as possible. So there is no need to create the house on the back or trees. If you want reflections add objects with reflecting materials.

You'll probably have to work of making the object materials white just enough them you disappear when rendered but not too much lest the skeletons shadow not appears if ambience is set too high (figure 2c). Round objects often need to be changed to boxy types.



When Susanna imports the skeleton it looks OK and it's shadow shows up good too.

You may of course add many posers to the scene as described earlier.

3) The process of creating other animations parameters involve the same steps as usually. Go to the *Animation setup* dialog and enter the fields as described earlier. One important thing: select render size exactly the same as your actual video. Your rendered Bryce scenes must be same! So if your video frame size is 320x240 then Bryce render must match those.

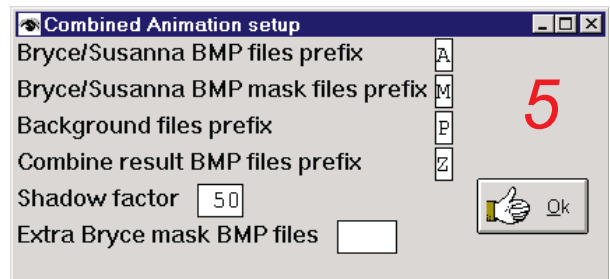
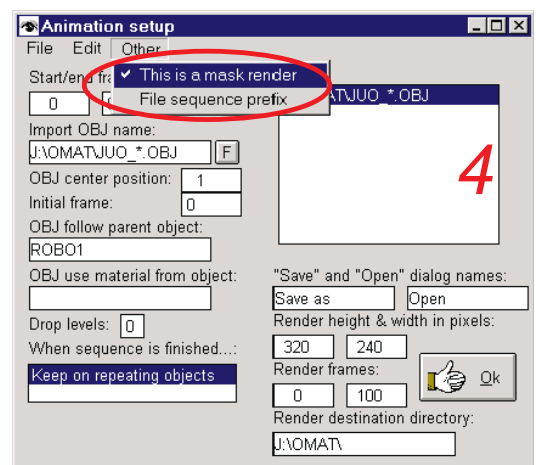
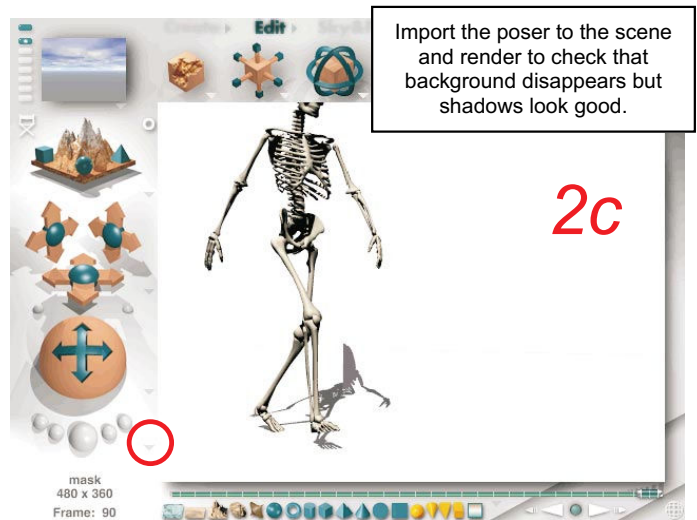
Then start the animation process with Susanna. When the animation is finished you have a series of bitmap files A0.BMP, A1.BMP, ... etc. on your designated render directory.

4) Next we need a "mask" render of all posers. Click the render options down arrow (figure 2c) and select *Mask Render*.

Then start again the animation process with Susanna just like in paragraph 3 above. Oh .. a couple points are different. There's a drop down menu *Other*. Select *This is a mask render*. A checkmark comes next to the selection (btw if you have just one poser in the scene this selection is not needed). Also select *File sequence prefix*. A dialog comes up; put *M* (as in *mask*) and press OK. Now Susanna will create animation files M0.BMP, M1.BMP, M3.BMP, ... and so on. Otherwise the render files in paragraph 3 would be overwritten.

5) Now we have the video footage as P0.BMP, P1.BMP, ... etc., a Bryce render files A0.BMP, A1.BMP, ... etc. and a mask render sequence M0.BMP, M1.BMP in our render directory. To combine them to create the final sequence from the main Susanna Windows select *Other > Combine renders*. Put file prefixes as shown in picture 5. Shadow factor tells how dark the shadow should be. Just accept 50. 100 would be probably too dark a 10 too light for most situations.

When you've pressed OK and the whole rigmarola of creating animations is finished you have a nice set of BMP files: Z0.BMP, Z1.BMP, Z2.BMP etc.. Compile this with your favourite AVI/Mpeg creator into a great looking F/X movie and be the next Steven Spielberg!



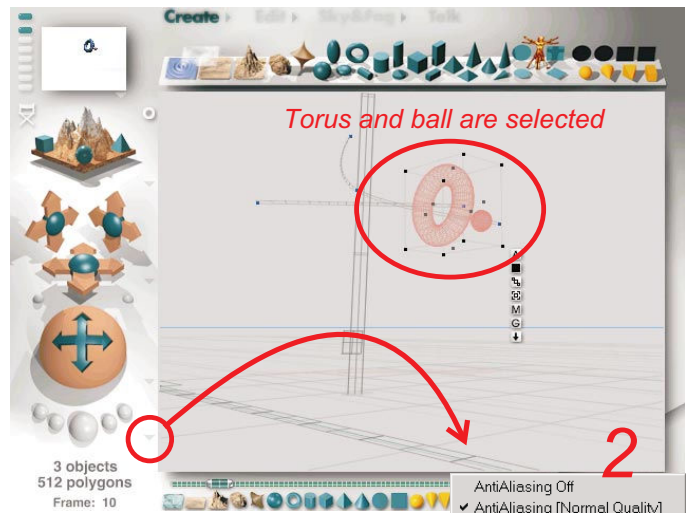
## Moving camera

If you use a moving camera the "camera" in your Bryce scene must replicate the movements. It is difficult but doable. Examine closely how much many frames each move takes and then replicate the moves with your Bryce "camera".

## How to get Bryce objects to my movie?

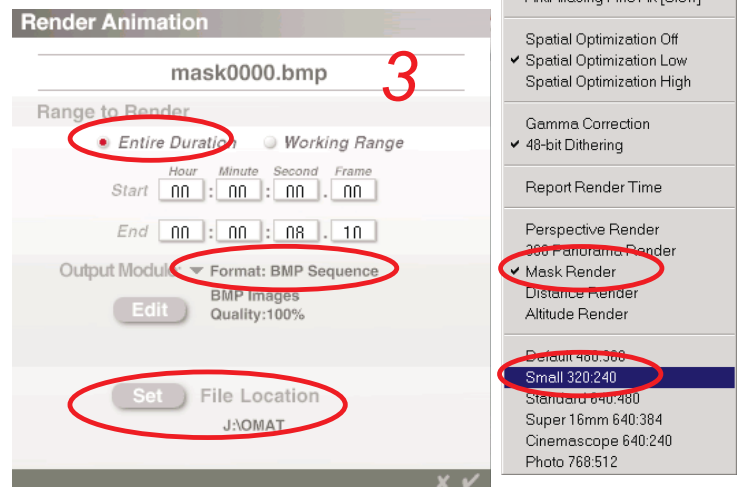
1) First create the animation like described earlier. Let's say you want a Bryce a ball and a torus in the scene with the skeleton. Create the torus and ball and assign a non white material. Then do the steps 1-4 to create the BMP files: A\*.BMP, M\*.BMP and P\*.BMP. Next we need to create a mask file sequence for Bryce objecta (torus and ball).

2) We now need to create a mask render of just the torus and the ball. Select the torus and then select options as in picture 2. Mind you, we are not using Susanna here. Make sure the file sizes (height and width) must match the other BMP files created earlier. In this example we have used 320 x 240. If you use other size you can set the document size also in *File > Document setup*.



3) Then select *File > Render Animation*. Select *Format BMP Sequence* and *File location* to same as the other BMP files (figure 3) and then press the check mark.

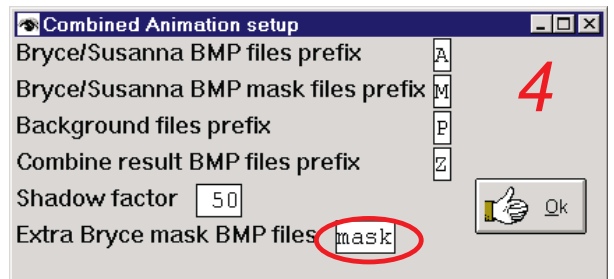
Bryce usually creates the masks pretty fast. After it's done you have mask0000.bmp, mask0001.bmp, etc. in your designated files directory. Make sure it's the same directory as the other files.



4) Then from the main Susanna Windows select *Other > Combine renders*. Put file prefixes this time as:  
 - Bryce/Susanna BMP files prefix: A  
 - Bryce/Susanna BMP mask files prefix: M

- Background files prefix: P  
 - Combine result BMP mask files prefix: Z  
 - Extra Bryce mask BMP files: mask

... and press OK. Then you will have a nice set of BMP files: Z0.BMP, Z1.BMP, Z2.BMP etc.. Compile this with your favourite AVI/Mpeg creator into a super looking F/X movie and James Cameron will consider hiring you for his movie project *Titanic II: Return of Jack!*



## What could go wrong

Remember each file sequence must be same size and have 24 bit color depth. Each file sequence must have same set of file, ie. you can't have mask file 1-50 and scene files 1-100. If the skeleton appears to slip either shorten or lenthen his path and try steps 1-5 again.

# 3d Motion Blur

## What is Motion Blur

Bryce renders every image crystal sharp. This is true for every frame of animation resulting in jumpy and unrealistic motion. In single pictures objects should look moving fast just appear to "hang in the air". So even when creating single pictures applying motion blur adds realism.



When a moving object is captured on film or digital video it is blurred somewhat. Take a look at the pictures below. The picture on the left has motion blur but the one on right does not. The picture on the right is sharp but you cannot tell from the picture whether she is standing on one foot or running. With motion blur it is immediately evident that she is running. The motion blurred image is blurry but that is how she would look if the frame was a still from a movie or paused video tape segment. Check the effect by using the pause key of your VCR in the middle of a action packed scene. The action scenes are blurry.

The blur effect is variable. The third picture has half of the blur effect. The picture is more detailed. Susanna makes 3d motion blurred of your scene. The "3d" here means that only those parts that actually move are blurred in relation to their speed and direction. So if your scene has static objects (background sky, mountains farther away) they remain as sharp Bryce can render them. On the other hand if you have a fast moving camera flying over scenery most everything will blur unless they are static in relation to camera.

Are there any disadvantages to motion blur? We'll one thing for sure: render times are often quadrupled

or more depending on the scene and how good a blur you need. Unfortunately there is no good way around this.

### Can I generate still picture with motion blur?

Of course. A still is just a BMP file from your animation. The blurred girls on this page are compiled from an 8 BMP file long and 4 BMP file long "movies".

### How to create motion blurred scenes?

Creating motion blur into your scene requires patience and planning ahead. For the scene to be motion blurred adequately you must render the scene in slow motion. So if you have a scene of girl running past camera it takes about two seconds. So if you are creating a 25 fps (frames-per-second) movie you need  $25 \times 2 = 50$  BMP files. When adding motion blur you must at least quadruple that so you need 200 frames. If the action takes a lot of screen real estate go even further and use 8x motion blur and 400 frames. This is the way it's done in big-budget movies productions with 3d effects: hundreds of computers rendering lots and lots of frames.

So to create an animation with motion blur do everything in 4x or 8x slow motion.

Nothing really is different using Poser, Bryce and Susanna. In the end you get a series of BMP files. If you need to do motion blur you need more frames or BMP files which Susanna will cook into motion blurred movie segment.

Here's an example: Lets say you have created a 400 BMP file of a girl running past the camera. The BMP files are a1.bmp, a2.bmp, a2.bmp, ..., a400.bmp and they are all in directory c:\susanna.

- In Susanna choose *Menu* and *Do Bryce Animation*. The *Animation setup* window comes up. Make sure that *Render destination directory* is **c:\susanna** (in this example). Susanna needs to know where the rendered BMP files are. Then press *Esc* because we don't want to generate the files again. We just wanted to check the directory name.



- From Susanna main window choose *Project* and *Motion blur*. Window *Apply motion blur* comes up.

*File sequence prefix*

Since our files have A for name prefix (they are a1.bmp, a2.bmp, a2.bmp, ..., a400.bmp etc.) here is A.

*Sequence steps*

Here we have 8. So our 400 files will be compressed into  $400/8 = 50$  motion blurred BMP files. 30 is maximum.

*Start sequence*

This is the number of initial BMP file. Since our files are a1.bmp, a2.bmp, a2.bmp, ..., a400.bmp etc.) here is 1.

*Save as sequence name*

If you have Z here the 50 BMP files will be named z1.bmp, z2.bmp, ..., z50.bmp. The new files will be in the same directory as original files.

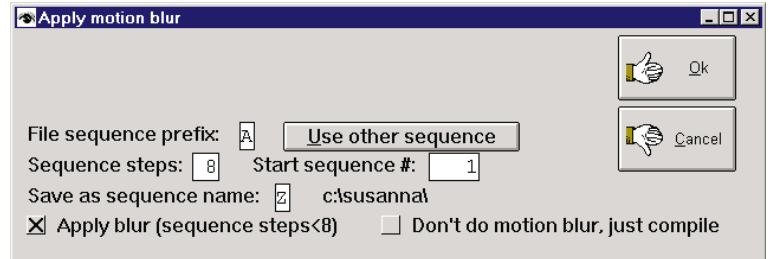
*Apply blur*

When creating a motion blur check this on if your sequence looks "jaggy". Most often this is required if your Sequence steps is less than 8.

*Don't do blur, just compile*

Having this on disables any blurring.

Lastly press OK. The process takes some time but is a lot faster than rendering. As a result you should now have a sequence of files z1.bmp, z2.bmp, ..., z50.bmp. Compile them into an AVI, Mpeg or whatever. Check out how it looks like and come back and tweak the settings some more to see more how a blur is created.



**What is the *Use other sequence* button used for?**

Normally Susanna will use a sequence of files generated using Bryce and Susanna. Susanna always numbers them a1.bmp, a2.bmp, a2.bmp, ..., a400.bmp etc.. But if you create a BMP sequence with just Bryce or Poser or any other 3d software such as Vue you often get a file sequence something like test0001.bmp, test0002.bmp, test0003.bmp, ... and so on. If you press *Use other sequence* you are prompted for an alternate sequence. The sequence uses a C sprintf style "stencil" but if you are not a programmer just render the files as test0001.bmp etc. and use **c:\susanna\test%04d.bmp** here.

# How Does Susanna Work

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## The operation in a nutshell

Susanna is basically a macro program that sends Bryce commands what to do. It also keeps tabs on what's happening so it can send next commands when Bryce has done it's current chore. The commands Susanna sends Bryce are stored in script files.

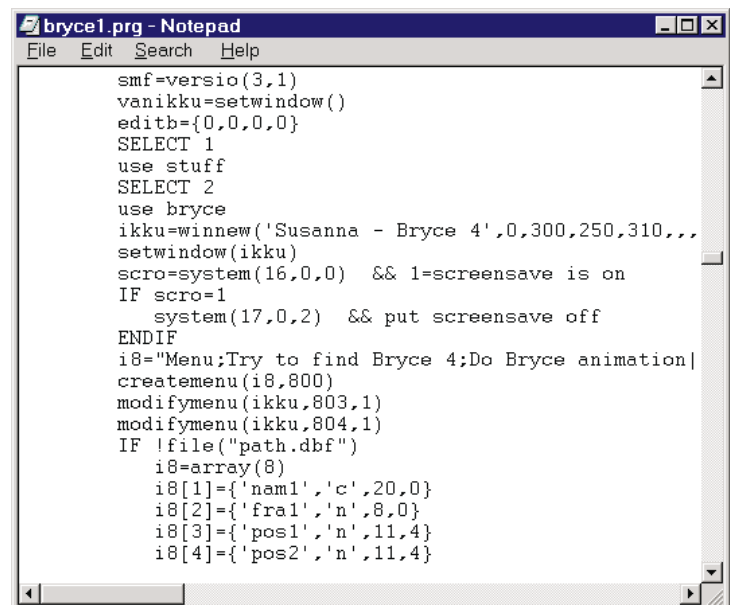
Most often Susanna sends Bryce keyboard shortcuts such as Ctrl+Alt+E which brings up an *Object attributes* dialog window. For those actions that have no shortcut Susanna uses the mouse to press buttons and makes things happen.

While all his goes on Susanna keep looking at Bryce windows to find out if the her last command has been executed by Bryce. She often looks at certain pointers on the screen to figure out that. For example when she presses the "Solo" button she waits it to get red. if nothing happens, she tries again for a few times. For this reason you should not change views, switch to another program etc. while animation is going on.

## The Susanna Script Language - open source

Susanna scripts are stored on PRG files. The programming language resembles Xbase language which is used in many programs. Susanna also used DBF files common to dBase, Microsoft Foxpro and others.

The Susanna script files can be edited and recompiled to add features and make changes. This feature is open only to programmers who know what they are doing. So there: you have been warned! Don't mess things! Ok ... ok. Here's a quick preview. In Susanna directory there's a script source file `bryce1.prg`. It contains for example the creation of Susanna main windows and menus. Let's say you you don't like the default size and want to set to something else. Then you can edit the parameters in line `ikku=winnew(...)`. Later you can recompile the source so that the Susanna will work with new settings. To recompile `bryce1.prg` open a dos box and run `mikkocom bryce1` in the Susanna directory.



```
bryce1.prg - Notepad
File Edit Search Help

smf=versio(3,1)
vanikku=setwindow()
edith={0,0,0,0}
SELECT 1
use stuff
SELECT 2
use bryce
ikku=winnew('Susanna - Bryce 4',0,300,250,310,,,
setwindow(ikku)
scro=system(16,0,0)  && 1=screensave is on
IF scro=1
    system(17,0,2)  && put screensave off
ENDIF
i8="Menu;Try to find Bryce 4;Do Bryce animation|
createmenu(i8,800)
modifymenu(ikku,803,1)
modifymenu(ikku,804,1)
IF !file("path.dbf")
    i8=array(8)
    i8[1]={'nam1','c',20,0}
    i8[2]={'fra1','n',8,0}
    i8[3]={'pos1','n',11,4}
    i8[4]={'pos2','n',11,4}
```

Who needs this functionality, after all only techie nerds can make use of it? Well the point is to provide you, our honored customer, a way to add & change the program to suit you. If a feature is missing or implemented to your disliking *it can be changed*. You won't hit a brick wall. You can get a third party to make necessary changes or do it yourself.