



This tutorial is about mirror animation

The animation presented is for bowler walk down the alley and throwing the bowling ball.

My friend Ed gave me an animation for right hand side bowler. This tutorial present my work in mirroring the right hand animation to create the left hand side one.





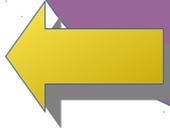
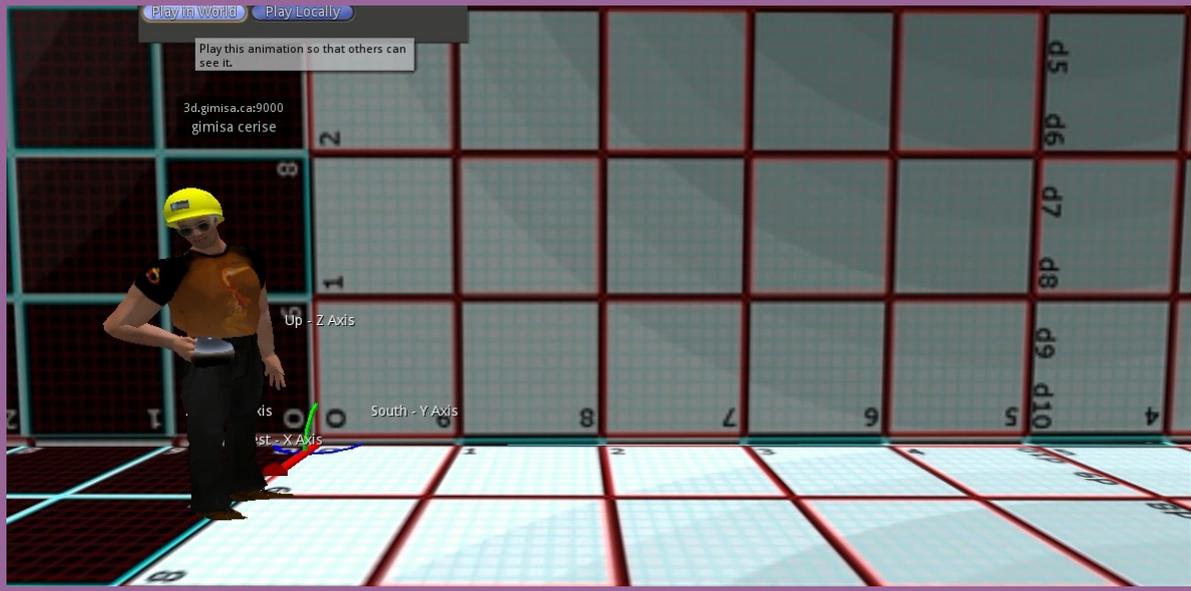
# ~MIRROR~ animation



The original animation is created by Ulrika Zugzwang from SL. I was unable to find the bvh source file on the web. So my work start from the animation available in opensim.

1) Make a video of the animation in opensim.

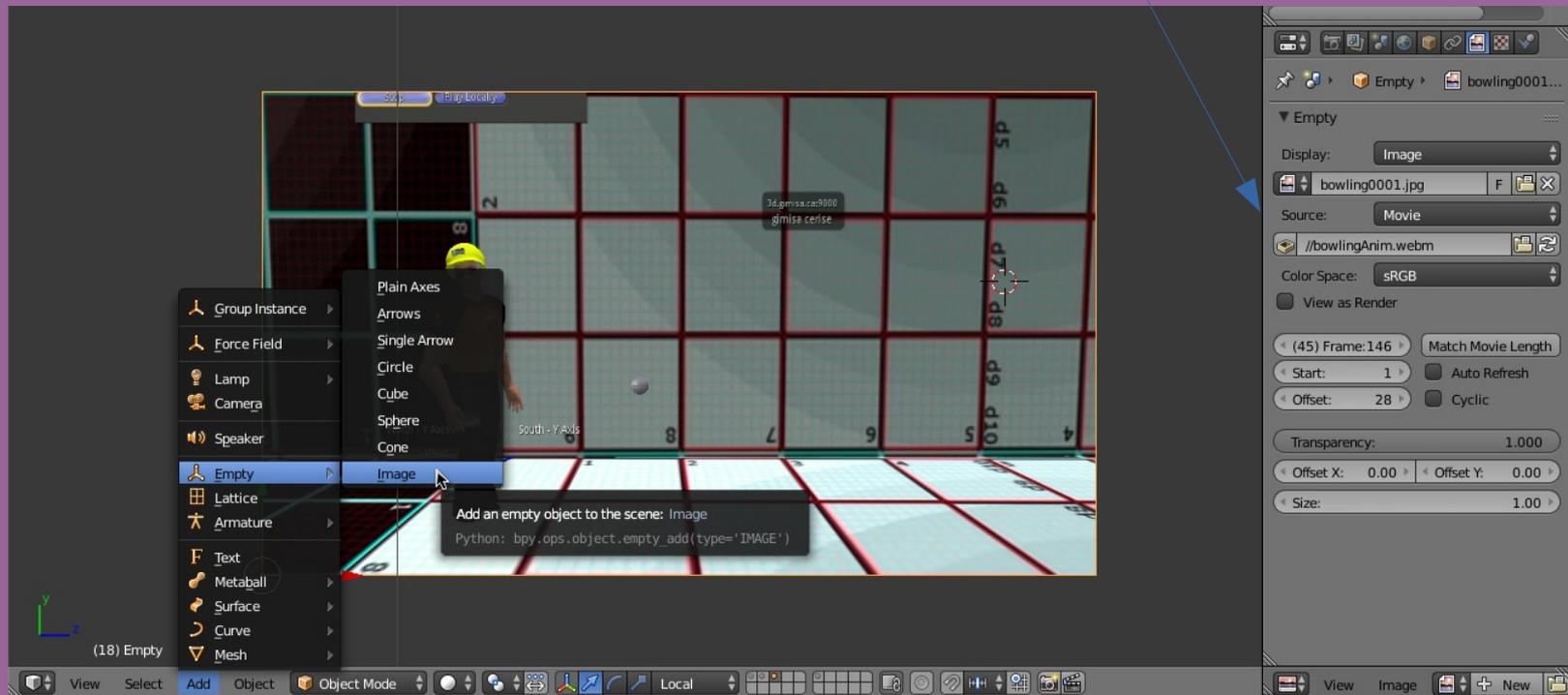
I use Kazam to do that : kazam web site



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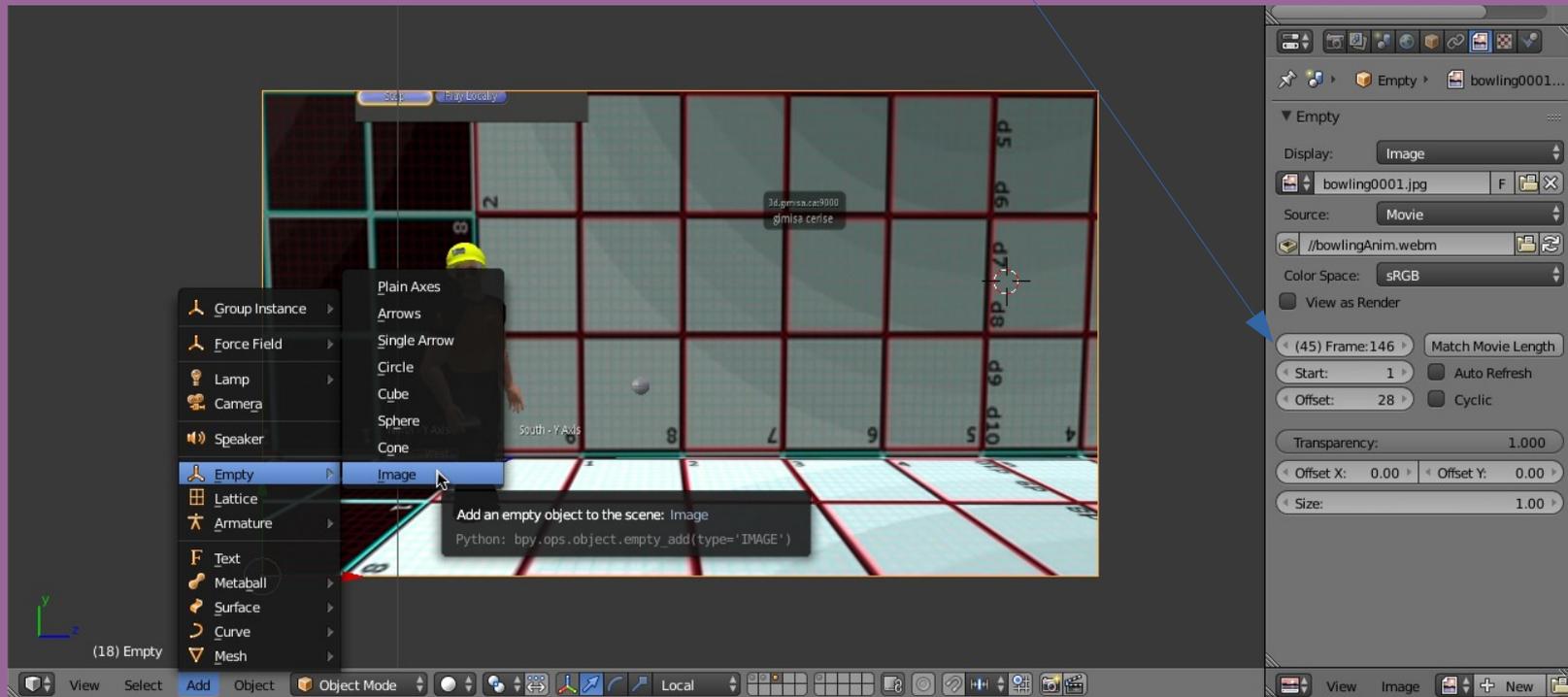
- 2) Open blender and insert an empty object.
  - a) use empty with image type.
  - b) texture with video produced in step 1.



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- 3) The empty is mirror so the image is reverse.  
a) notice that blender detect the video frames



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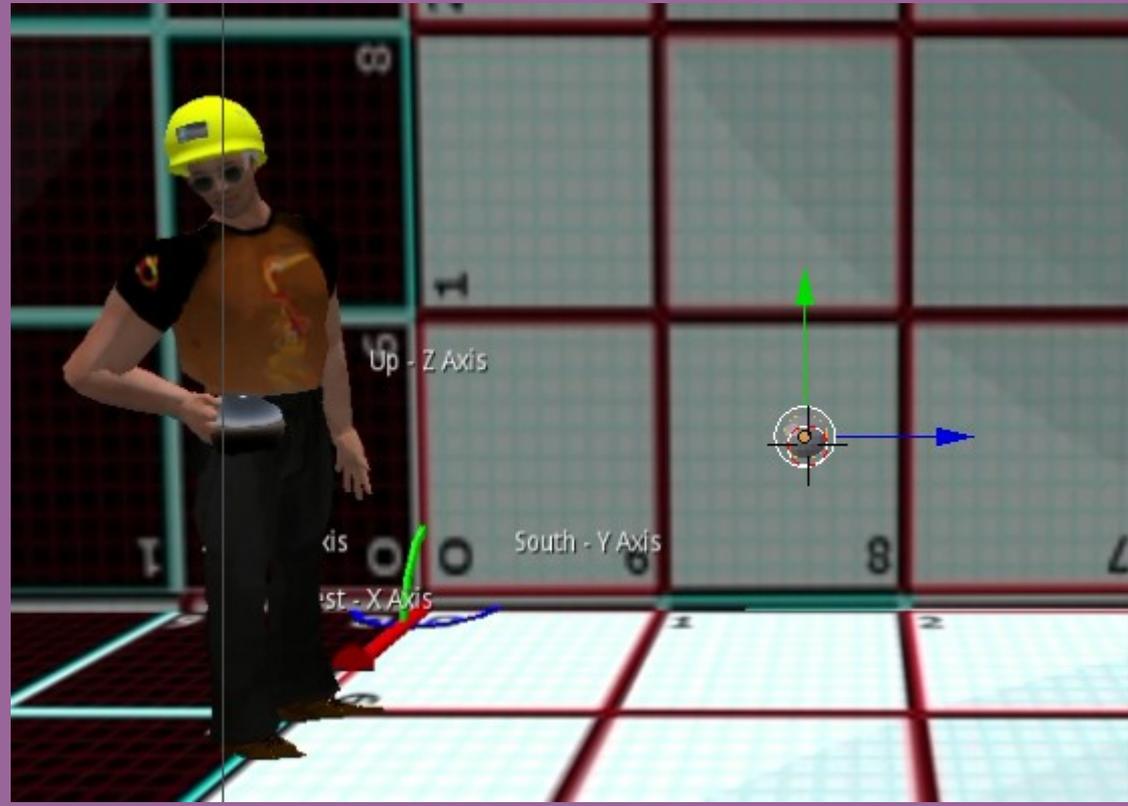
4) Changing offset frame give you the animation steps

(2) Frames: 146	(15) Frame: 146	(16) Frame: 146	(22) Frame: 146	(29) Frame: 146	(31) Frame: 146	(33) Frame: 146
Start: 1						
Offset: 1	Offset: 14	Offset: 15	Offset: 21	Offset: 28	Offset: 30	Offset: 32





5) Add a sphere to the scene to be use as view reference.

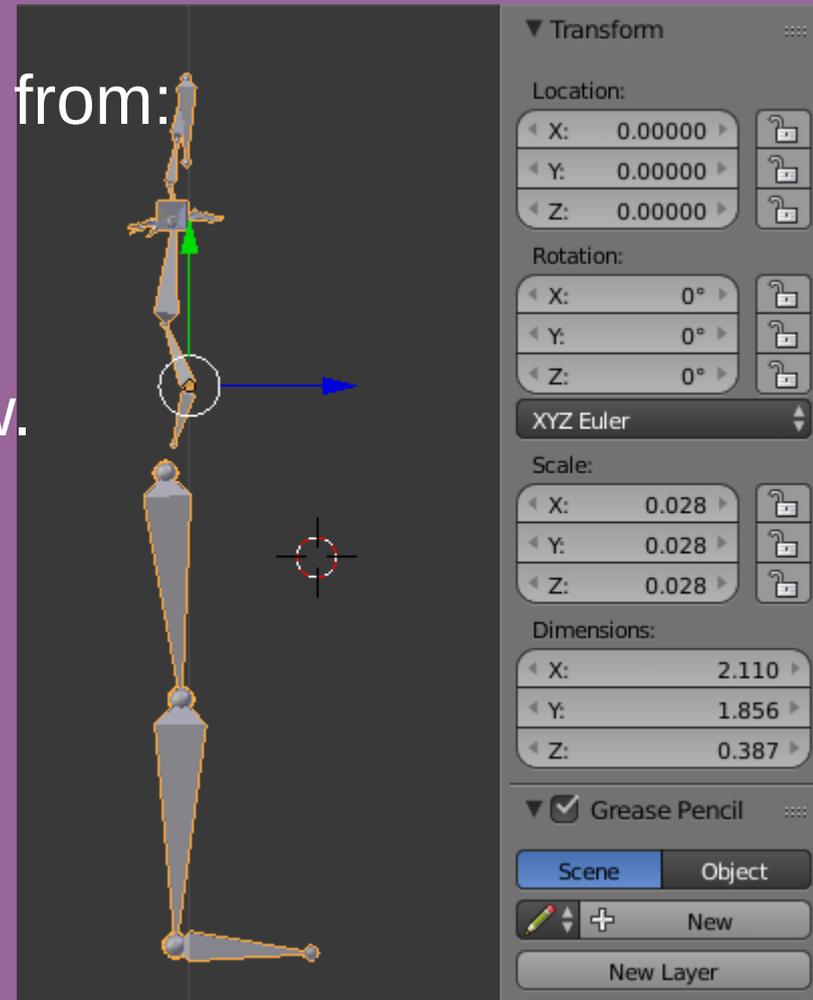
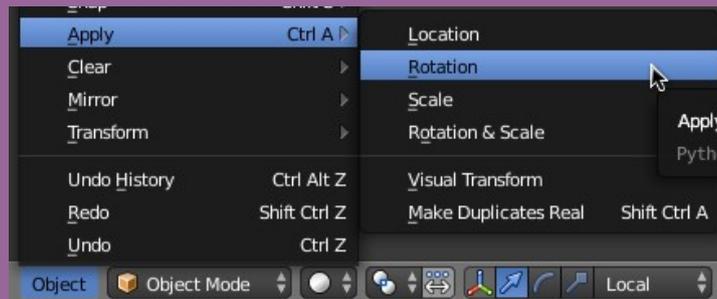


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6) Import the TPOSE.bvh animation file from:  
Standard bvh animation files.

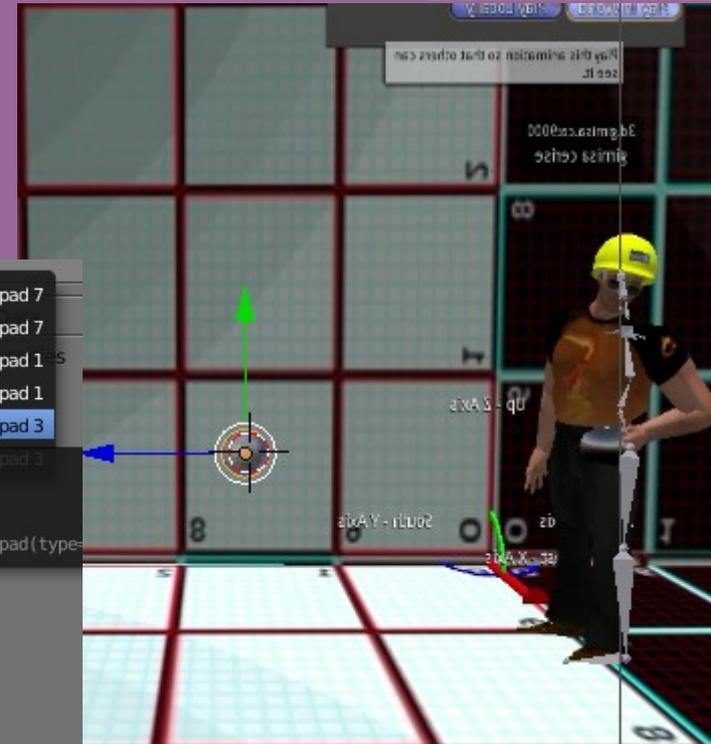
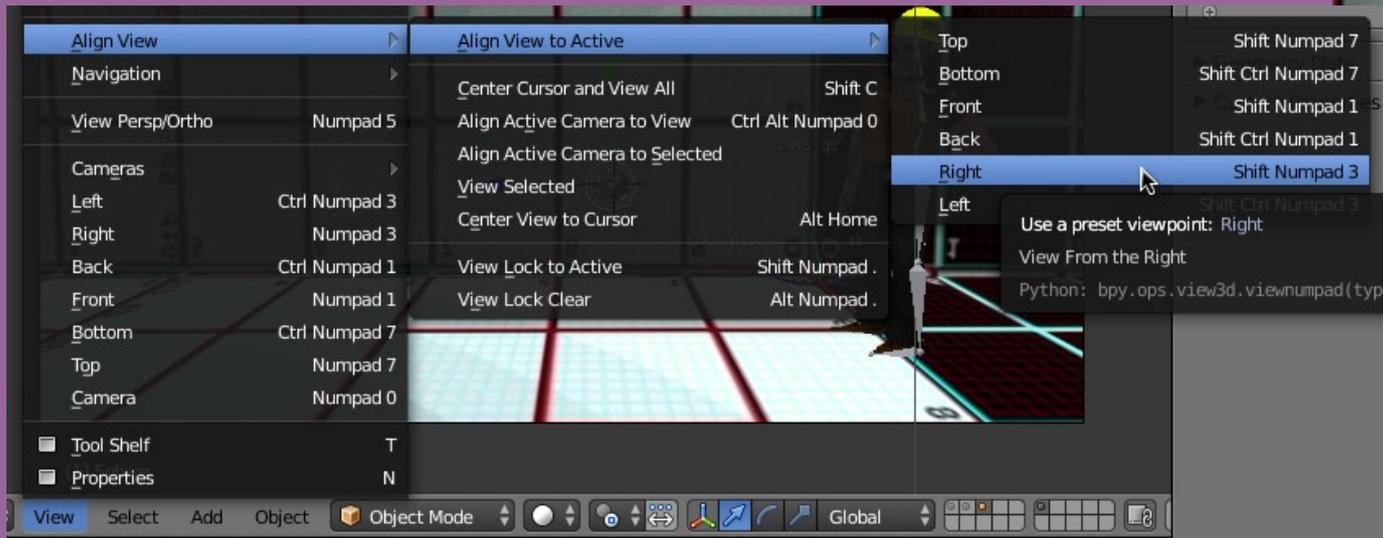
7) Make sure the rotation is set as show.  
Apply rotation to the model  
so rotation is 0.



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8) Set your 3D screen view to animation.  
Select the ball use it to set the view.



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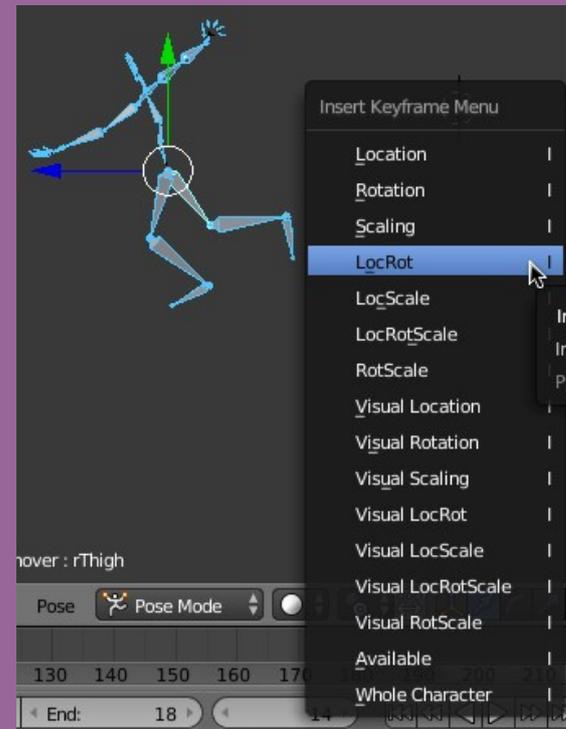
- 9) Select the empty. Change texture to next frame.
- 10) Then select the armature in pose mode and set bone positions to suit.





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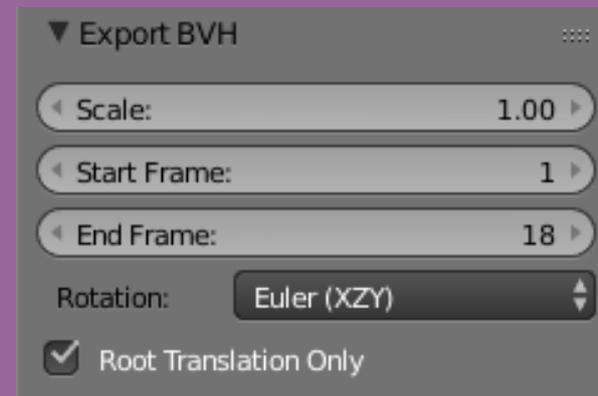
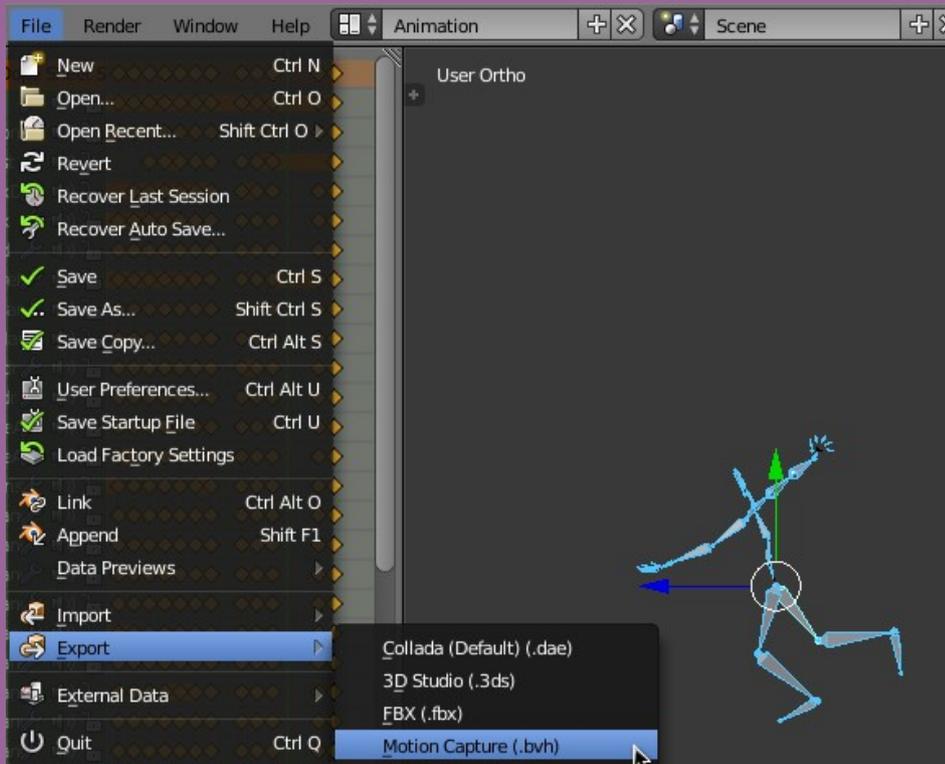
11) Select the armature. Set the keyframe with locRot values.



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12) Once all keyframes are stored, export animation to bvh.



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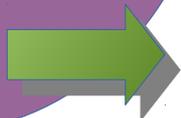
12) We still need to adjust the frame rate per seconds by editing the exported bvh file as show:

13) Import inworld.

```
1 HIERARCHY
2 ROOT hip
3 {
4     OFFSET -0.000000 -0.260082 0
5     CHANNELS 6 Xposition Ypositio
6     JOINT abdomen
7     {
```

```
307     JOINT rThigh
308     {
309         OFFSET -4.500466
310         CHANNELS 3 Xrota
311         JOINT rShin
312         {
313             OFFSET 0
314             CHANNELS
315             JOINT rF
316             {
317
318
319
320
321
322
323         }
324     }
325 }
326 }
327 MOTIO
328 Frames: 18
329 Frame Time: 0.144444444
330 -0.000000 -0.260082 10.418023 -0
```

The screenshot shows a software interface with a menu on the left containing 'Upload Image (free)... Ctrl-U', 'Upload Sound (free)...', and 'Upload Animation (free)...'. The main panel displays settings for an animation file named 'blowingthrowLeftAnimation.bvh - 2.60 seco'. The settings include: Name: blowingthrowLeftAnimation, Description: gimisa bowling walk down animation, Priority: 2, Loop: checked, In(%): 0.000, Out(%): 100.00, Hand Pose: Relaxed, Expression: [None], Preview while: Standing, Ease In (sec): 0.300, Ease Out (sec): 0.300. At the bottom, there are 'Upload (free)' and 'Cancel' buttons. A blue arrow points from the 'Upload Animation (free)...' menu item to the 'Frame Time' field in the code block on the right.



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## SUMMARY

- Make an inworld video of the animation to mirror.
- Use EMPTY object to post your video so you can copy the poses for you armature bone location.
- Use animation screen presentation and insert animation keyframes for LOCATION and ROTATION.
- Play you animation to validate that it look good . Correct as needed.
- Export the BVH file out from blender.
- Edit the file to change the frame time.
- Import inword as animation with default settings.

GiMiSa 181007

