# AI for Games Library
# Version 1.1

Changes since 1.0.3

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| 1 | The `world.draw()` method has been deprecated and replaced with the `world.draw(elapsed-time)`. The purpose is to simplify the creation of animated renderers. |
| 2 | The Picture class method <br><br> `public void draw(BaseEntity owner, float posX, float posY, float velX, float velY, float headX, float headY)` <br><br> has been deprecated in favour of the method <br><br> `public void draw(BaseEntity owner, float posX, float posY, float velX, float velY, float headX, float headY, float elapsedTime)` <br><br> The Picture class is the base class for all renderers so this applies to user-defined renderers. |
| 3 | The BitmapPic class, which provided frame-control methods to control image animation, has been modified to take advantage of the new draw method. It means that this class is responsible for animation timing. |
| 4 | User defined entity classes that inherit from the Artefact class will now be updated by the `world.update(elapsed-time)` method. <br><br> To make use of this you should override the <br><br> `public void update(double deltaTime, World world)` <br><br> method in your own class. |

All the on-line programming guides and the Processing examples included with the library have been changed to avoid methods deprecated in version 1.1 so will not work in previous versions.

Fortunately most programs using earlier versions of this library will work unaltered, the only exception would be programs that use the BitmapPic class. The new class uses the two methods -

`public void setAnimation(double interval, int dir)`

`public void pauseAnimation()`

to control the animation.


## Converting existing programs to work with V1.1

You might do this to make your programs future-proof, or you may be in the process of developing a game using a previous version but want to use the latest version of this library.

Step 1

If your program uses the `world.update(elapsed-time)` method then change the call `world.draw()` to `world.draw(elapsed-time)` where `elapsed-time` is the variable holding the number of seconds since the last update.

If you are not measuring the elapsed time, so not using the world update method, use `world.draw(0.0)` instead.

Step 2

In any user-defined renderer class add the parameter `float elapsedTime` as the last parameter in the draw method header.

Step 3

If you have used the BitmapPic or created a class that inherits from it, then it will need to be modified to use the setAnimation and pauseAnimation methods. Look at the 'AnimRenderer_01' example that comes with the library.