

Instructions for Creating a “Slowmation” on a Mac or PC using “SAM Animation Software”

Copyright 2010 © Garry Hoban. All Rights Reserved
University of Wollongong, Australia (modified 21-4-10)

SAM (stop-action-motion) Animation is an easy to use software developed at Tufts University Center for Engineering Educational Outreach in Medford, USA. It was funded from a US National Science Foundation grant under the direction of Brian Gravel. It is a front end for QuickTime and the software costs US\$49 but the free demo version is satisfactory for producing a Slowmation. The URL to download the free demo software SAM for both Mac or PC use is <http://www.sanimation.com/>. You need to register on the site first and the software will be emailed to you in a compressed zip file. The following instructions are based on the 5Rs teaching approach for creating a slowmation that involves students designing and making a sequence of five representations. We assume that you have already completed the first two representations (i) **Background** and (ii) **Storyboard** (along with scripting the narration).

Representation 3: Models and Photographs

1. Make sure the students are aware that many small movements, about 1cm, are better than large movements. Demonstrate a simple animation using some post it notes and flip them. Start small by making a simple slowmation showing small movements using existing models or people.
2. Lay down a project cardboard sheet or butcher’s paper (which can be coloured) and build the models on the floor flat with the camera mounted on a tripod looking down at the models. Make sure the models are movable and not stuck to cardboard. Tape the cardboard and camera to the floor for stability. Existing plastic models can be used standing up so position the camera at about 45 degrees to the models.
3. Make sure the image size for the pictures is set on the **SMALLEST SIZE** such as 640 x 480 pixels or the lowest resolution. If you are using more than one camera make sure that they are the same photo size.
4. Move the models about 1cm at a time for each photo. A 30 sec slowmation needs about 50 photos.
5. Take one photo at a time which can be copied later for a static image and labels can be later added.
6. Connect the camera to the computer and download the photos onto the computer.
7. Make a folder on the desktop, name it and copy your photos into the folder. Disconnect the camera.


Representation 4: The Animation



Uploading and Editing

1. Click on “SAM” and click “Create A New Project”
2. Write the name of your project in “Save As” and click “Where”. I usually place the folder on the desktop, click “Create Project”.
3. Click on “import”. Find the folder with the photos on the computer desktop, click on the first image and then press “shift” and drag the cursor down to select all the photos to import all the photos. Click “open”



4. Select the speed of the frames by moving the frame slider under the left hand screen

 Most slowmations work best on “2fps” (2 frames/second) or write “2” in the box which is half a second per photo.

5. Make sure the pointer is at the beginning by clicking the small arrow with the one vertical line second from the end . Click on the large arrow to show the program.  Your left and right arrows on the computer allow you to move quickly through the photos to delete the ones that are unnecessary or to copy. The structure is like a loose leaf folder in which you can delete photos or insert them one by one.


Making Static Images to Suit a Narration


1. Some photos are important to explain the concept and need to stay on the screen longer than half of a second. Play the animation by clicking the large arrow and pause it by clicking on the arrow again. You can move frame by frame using the arrow with two lines or use the arrow keys on your computer. Select the important images to stay on the screen longer than .5 sec and click on “Edit” and then “Duplicate” as many times as needed.

Adding real-life photos

1. You can insert real photos from the web along side existing photos. Click on the “Import” arrow, select photo and import. These need to be copyright free so you can get them from Wikipedia http://en.wikipedia.org/wiki/Main_Page or from Creative Commons at <http://search.creativecommons.org/>

Adding a narration

1. Slowmations need a narration or text but usually not both. It is advisable to write a narration when storyboarding to help you think about the sequence of movement. Click the microphone icon on the top right hand corner to turn on the microphone. 

2. Click the red recording button to start recording and click again to stop. Make sure your arrow is at the beginning.  If you don't like the narration just click on the squiggly line under the photos and press “delete”.

3. Don't worry if you have trouble aligning the narration with the photo sequence, you can easily click on the photos and either delete or duplicate photos to fit the narration.

IMPORTANT: Saving the Animation in the Right Format

1. Make sure you click on “File” and “Save” regularly as you go.

2. Whilst you are using SAM animation, it is not a completed movie as the photos and narration need to be compressed into a finished format. When the animation is completed you need to make it into a QuickTime movie because it is still within the software program. Go into “File” and click “Export” and name your file in “Save As” dialogue box and where it is to be saved to in the “Where” box (usually to the desktop). It is best to leave the “Export” box as “Movie to QuickTime Movie” or you can change it to another file size for uploading to the internet or Ipad if needed. The finished project should be a “.mov” file which you can now copy it to a thumb drive, a CD or upload to the internet.