

CS 1301 – Spring 2009

Homework 7 – Special Effects Extreme

Due: Friday, March 27th, at 6 PM EST (10% off if turned in before Monday, March 30th, at 6PM)

Out of 100 points

Files to submit: hw7.py (Plus input images as gif files and example animated gifs demonstrating the effects if you choose)

For Help:

- TA Helpdesk – Schedule posted on class website.
- Email TAs
- Newsgroups

Notes:

- **Don't forget to include the required comments and collaboration statement (as outlined on the course syllabus).**
- **Do not wait until the last minute to do this assignment in case you run into problems.**

- If you find a significant error in the homework assignment, please let a TA know immediately.

Part I – The Assignment:

This is an open-ended group assignment where your robots will become the director, camera man, and editors of the next big Hollywood Hit. One or more robots will be used to take a series of pictures using their cameras, then the images should be manipulated to create a series of special effects. In your next assignment you will write, direct, shoot and edit a feature film, using the special effects you develop here. You have been assigned to groups (of 3) to do this homework in your recitation.

Create innovative robot camera work/special effects. Your group can do as many special effects as you want, but can only earn up to 100 points (e.g. you can do above 100 points if you are worried that you may lose points on one of your effects). Several examples:

- Seeing-Red (15 pts) -- Make the scene have a red tint.
- Tempo-Change (15 pts) -- Change the tempo of the scene in an interesting way.
- Robot-Zoom (15 pts) -- Move the robot toward a scene to create a zoom effect.
- 360-view (15 pts) -- Use the robot to get a 360 degree view of a scene.
- [Dolly-Shot](#) (15 pts) -- Use one robot (or maybe two!) to pan across a scene.
- Fade (30 pts) -- Fade a scene to black.
- Overlay (30 pts) -- Draw text or some graphic on top of a scene

- Robot-View (30 pts) -- Invert the image based on a detected obstacle.
- Extended Exposure (50 pts) -- Combine multiple frames into one, giving the effect of extended exposure.
- Cross-Fade (50 pts) -- Fading from one scene into another.
- [Split-Screen](#) (50 pts) -- Combine two shots (maybe from two robots!) into one frame.
- Green-Screen (50 pts) -- Film using a green background, later replace it with some other image.
- Screen-Shake (30 pts) – Image on the screen “shakes”.
- Make Your Own (10 - 100 pts) -- The point value will depend on the novelty and difficulty. Let us know what you think it is worth and we'll take that into consideration.

Resources

- [Notes](#) about the Myro image interface.

Have fun with this! Save your code in a file called **hw7.py**. If your code does not demonstrate the effects you have created, you should also submit an animated gif called **effects.gif** to show off your special effects, but you will still need to submit the python code behind it all. If your code runs fast enough to display the special FX in real-time, you do not need to turn in an animated gif file. If it will take a long time to re-create your special effect, we recommend you turn in one or more effects.gif file(s) [you may name them based upon the effect] to demonstrate the special effects you have created.

Part II – Turning it in:

As per the usual, **EACH** group member needs to submit a copy of the group’s file(s) to T-Square before the deadline. Don’t forget to include a collaboration statement with your other group member’s names.

Happy filmmaking!

Written By Chris Farrell and Melody Nailor, CS 1301 Fall 2008