A7: Introduction to Quartz Composer

Introduction

Up until now, we have been working with audio. In the next few assignments, we will look at another aspect of multimedia -- video. We'll start with motion graphics, using a tool that comes with Mac OS X called Quartz Composer.

Task

The Quartz Composer application can be found in `/Developer/Applications/Graphics Tools/ Quartz Composer`. The paradigm of Quartz Composer should already be familiar to you: it is a patching mechanism that operates on similar principles to Max/MSP. A brief introduction to Quartz Composer can be found here: http://www.giantmike.com/articles/quartzcomposer.html

Your goal is to create a Quartz Composer composition that renders an animation similar to the one provided on the website. It consists of a continuously rotating cube with white text that glows and pulsates with a green colour (feel free to use your own favourite colours). We suggest you approach the composition in the following manner:

1. Start with a "Basic Composition", and delete everything except the gradient layer.

2. In the clip library, add a "Glowing Apple Logo". This is actually a macro patch — double-click it to open it up, and look at how it is built. Starting from this patch, change it from a glowing Apple logo to glowing text.

3. Modify the patch so that the pulsating glow is in another colour (the text, however, should still be white). Hint: use the "Multiply" node.

4. Instead of connecting the resulting image to a billboard node, connect it to the six faces of a cube. Note that if you just map the text to the cube, it will be distorted, and it will moreover have a transparent background. You will need to composite it with a background image. To remove the distortion, you will have to change the settings of the image from string node from "dynamic dimensions" to "fixed dimensions".

5. Finally, animate the x and y rotations of the cube.

Answer the following questions:

1. How do the LFO and Interpolation nodes differ in the values that they generate?

2. Quartz Composer provides a variety of compositing operators, including "addition", "multiply" and "over". Briefly explain the difference between these three operators.

Additional Credit

Credit above 2.0 will be awarded for the following:

1. Turn your glowing text generator into a macro patch that has three inputs (string, glow colour, background colour) and one output (an image). Demonstrate your macro patch by assigning each side of the cube a different text and/or colour.

2. More parameters, such as string colour, using a background image on the face of the cube instead of just a colour, etc...

3. Additional cool animations (use your imagination!)

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Submission

Submit a zip archive of your Quartz Composer patch to **eric@cs.rwth-aachen.de** by **Sunday, December 17, 2006 at 23:59**. The subject of your email should be "**M3 Assignment 7**"; be sure to use this **exact** subject line as it will be used to filter assignment submissions for grading. You should also include a README file (plain text or pdf) that includes the names of you and your group member(s), a brief summary of what you accomplished, and answers to the above questions.

It is strongly recommended that you test your submission before sending it to us. If we cannot figure how to open your submission (strange or non-obvious compression format, no README file) your assignment will be automatically returned to you without a grade.

Late assignments will be graded with a penalty of 0.5 per 24 hour period after the due date.