



## Introduction

In addition to allowing you to build cool animations very quickly, Quartz Composer also provides support for building interactive graphics demonstrations.

At our chair, one of our research projects is called “Time Window”, an interactive system with a multitouch tabletop display that allows people to interactively explore layered maps. In this assignment, you will build a simplified version of the Time Window software.

## Task

The interaction in your “Time Window Lite” will be accomplished using the mouse. Using a mouse, the user will be able to gradually “scrub away” the top layer of a map (a satellite photo of Aachen) to reveal the street map underneath. As long as the mouse button is held down, the user should be able to see the parts of street map that he/she has scrubbed away. Once the mouse button is released, the scrubbed portions should gradually disappear, returning the image to the original satellite photo. Source images (from Google maps) is provided on the website. For this assignment, you are required to implement the following features:

- Scrubbed regions should fade in gradually, with “soft” edges.
- Scrubbing should occur directly underneath the mouse cursor position.
- Scrubbed regions should gradually fade out some time (e.g., 2 seconds) after the mouse button has been released.

You may find the following nodes useful: “Accumulator”, “Blend With Mask”.

Answer the following questions:

1. Is Quartz Composer a full 3D environment? Why or why not?
2. Explain the relationship between “units” of distance and “pixels” in Quartz Composer.

## Additional Credit

Credit above 2.0 will be awarded for any additional effects that you add to your patch (please document these in your README). Some examples:

1. Additional layers of map images.
2. Distortion effects or shadow effects to increase the feeling of 3D in the visuals.

## Submission

Submit a zip archive of your Quartz Composer patch to [eric@cs.rwth-aachen.de](mailto:eric@cs.rwth-aachen.de) by **Sunday, January 7, 2007 at 23:59**. The subject of your email should be “M3 Assignment 8”; 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.