Proteus – Project Progress Report – Week 6

Summary

This week's progress was mainly consolidation, fixing, stablisation and improvements. Unfortunately the second milestone was narrowly missed, but this should be compensated for in the coming week.

What I intended to do

The features that I intended to implement this week were random seeking within a video and adding annotations to frames, both in terms of the back end data structures and the drawing code for visualisation on the front end. Some design work on the data structure to hold the annotation data was planned, and some more implementation work on the widget to display the video as well as the annotations, possibly rendering a composed pixmap from a memory buffer. I also intended to perform tests on the framework to see if it can handle higher-resolution videos and how it deals with various input formats. Finally, I intended to fix memory leaks and make sure that the GUI can cope with large videos while still maintaining a reasonable memory footprint.

In parallel to this, I hoped to be able to do more reading this week and to start looking at implementation details for the line snapping algorithm.

What I ended up doing

This week has been the first week that I really feel I failed to achieve my targets, at least in parts: I have implemented the random seeking and it is working (mostly, there are still some glitches and yet unresolved crashes), and I have dealt with the memory leaks as well as having modified the GUI to use a widget more suited for dealing with the annotations, and I have verified that the current code base can cope with large (50 minutes @ 640x480, 30fps, 500 MB file size) videos. However, I have failed to get to the point of having a fully working annotation interface - despite having designed and implemented the back end data structure, I am still missing the implementation and drawing code for the annotation process. I also, again, did not manage to do as much reading as I hoped to be able to do.

Where I am in the timetable

I have fallen behind by about a half a week to a week on the original time table; the next Milestone was due by the end of this week but hasn't been reached yet. It should hopefully be reached within the near future, however.

Problems/Issues encountered

The main issues encountered this week were of organisational nature - high supervision workload combined with several meetings in college that required significant preparation led to the time I could spend on the project being constrained, but what really affected the progress this week was that I went away to Oxford for the weekend for the Auslandstreffen der Studienstiftung, meaning that I didn't get much of a chance to do any work on either of Friday, Saturday or Sunday (apart from a few hours on the train). This should however not be an ongoing problem as this was the last event on a weekend this term that I am planning to attend, meaning that I should be able to devote most of the upcoming weekends to project work.

What I intend to do

The most important thing for me to do this week is to catch up with the lag that I have accumulated. This primarily means implementing the annotation facility, probably trying to implement it in such a way that the line snapping algorithm is included directly (rather than being added on top of an already working annotation facility, as previously planned). I also need to fix the occasional crashes that seem to occur with seeking. Fortunately, the next milestone is a sufficiently small step up that I expect to be able to catch up and reach it as planned.

Further remarks

There is still an unresolved issue with crashes occuring when seeking in MPEG files, however this only seems to occur with particular MPEG files and not with other video formats, so it will be ignored for now.