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| The University Of Victoria |
| Film Transport Project |
| Weekly Project Report #4 |
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| **Team Manager for the Week:**  **Team Recorder:**  **Week:**  **Instructor:**  **Supervisor/Client:** | **Anderson Li**  **Andrew Bornstein**  **29/05/2012 - 05/06/2012**  **Dr. D Constantinescu**  **Mr A.Makosinski** |

# Progress Report

In this week the following tasks have been completed:

* Presented initial design concepts to client – received adjustments and suggestions from the client on aspects of our design to be modified
* Printed several prototype sprockets for parameter visualizations
* Modelled film rollers in solidworks
* Printed the film gate using a 3D printer.
* Ordered and received sensors for film detection; led’s for illumination; a microcontroller for control; and assorted sensors, wires, and prototyping boards.

# Issues

After consulting the client and showing him the prototype sprocket, a number of changes were recommended.

* Increase the tooth height
* adjust the radius of the root of each tooth to match the tool size on the CNC machine
* increase the size of the shoulders where the film rests

The client also recommended that the maximum size of sprocket be used in this project. Although it comes at the cost of position accuracy, the film is quite damaged, so having as many teeth as possible moving the film forward is an asset. Incorporating variable accelleration of the stepper motor to move the film was also suggested.

The model of a film gate protoype was printed using a 3D printer this week. The results were very promising which made us re-think of using the 3D printer to make the gate parts instead. However seeing the part created brought up several issues:

* The algnment of the tensioner sometimes slip due to free space on one side. This needs to be constained.
* The hole for the film gate is a bit too small and obstructs the image of the frame.
* The current pressure plate design is difficult to print. This will have to be redesigned.
* The springs adds too much force, and needs to be adjusted.

As a final note there are a few uncertaines with the effectiveness of using the IR or reflective sensors as the film driver controller. This will be tested next week and our results will show us where to go next in the project.

# Next Week Agenda

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| Task | Task Lead |
| * Refine the film gate model in Solidworks * Create mounts for the LED’s and light filters * Testing the IR sensor and relflective sensor for the accuracy of the film drive. | Anderson Li |
| * Machine rollers * Machine sprocket parts * Submit drawings to Rodney for CNC milling sprockets * Get stepper motor running on the microcontroller * Design couplers for film reel mounting | Andrew Bornstein |

# Gantt Chart

