

EE 492 Weekly Report 3

Title: Development of a strain visualization microsensor based on Moiré fringes

Week 3: September 15 - September 28

Team Members: Christian Tanberg, Matthew Thies, Ki Jun Shin and Parvaraj Bhatt

Client & Advisor: Dr. Long Que

Summary of the Progress:

Over the last two weeks, we have met up once a week to discuss our individual work, and met up together once to work on the code. According to our timeline we should be starting testing simulations, however we are still trying to figure out how we are going to test it. Currently we are still working on building the moire fringe filter using the matlab code that we have. The four of us are putting most of our time on the code and figuring out what we can do to show different levels of strain.

Pending Issues:

Christian Tanberg: None

Kijun Shin: None

Matthew Thies: None

Parvaraj Bhatt: None

Individual Contributions:(Individual)

Name	Contribution	Working Hours	Total Hours
Project Manager: Christian Tanberg	Over the last two weeks I have been working on the distribution of the moire fringe filter to see what the best option is for making the symbols to detect the strain on the structure. Through this I was able to figure out that the distribution angular for our filter should be around 20 degrees.	7	20
Research Lead: Ki Jun Shin	In the past two weeks, I have been looking into the code we had in Matlab, and trying to make the change or difference for our images or symbols.	7	19
Test Engineer: Matthew Thies	I have worked on the Moire fringe filter code over these two weeks. I have been trying to get the change in strain to change the image shown by the filter.	7	19
Design Engineer: Parvaraj Bhatt	Over the last two weeks, I have been testing different distributions to see what shows up as an image and trying to figure out how different levels of strain will be shown - such as different symbols or numbers	7	20

Future Plans

1. Christian Tanberg: My goal for the next two weeks is to finish perfecting the distribution of the moire fringe filter and to start testing to see if the moire fringe filter I have been working on is usable for determining the strain on a structure. To do this I will need to think of some testing ideas on Matlab so I can test the filter. If the filter isn't able to accurately measure the strain, some redesigning of the filter might be needed.
2. Parvaraj Bhatt: In the future, I plan to keep manipulating the code to figure what we will be using as a symbol to represent the different levels of strain.
3. Kijun Shin: For the near future, I am planning to keep studying more codes for our Matlab, and decide what image or filter we will be using.
4. Matthew Thies: I plan to finish my part of the code which is to have the filter create a new image when strain changes. Then we will start doing testing with the code.

