Project: Intelligent Pattern Recognition of Moving Organisms Advisor: Santosh Pandey

# Weekly Report #10, Group 03: 3/26/2012

## Accomplishments

- Demo'd effective background subtraction, centroid finding.
- Discussed logic for tracking worms across multiple video frames.

## Plans

- Present to the class.
- Explore active-contours, scale-space theory, and other modern computer vision topics for a more robust solution to the tracking problem.

## Pending

- Update the webpage.
- Create tools for rapid prototyping OpenCV solutions in C++.

## Individual Contributions

Sam
- In this week, I spend a lot of time to figure out the algorithm for centroid finder class. I think we need more information about the worms to track and identify them separately. I also spend some time on how to find the splin of the worms.

Ryan
- I've been reading the plethora of papers in depth and really trying to sandbox some implementations of the things described therein. I adopted EMGU (C# OpenCV library) as a method for rapid prototyping for me, since I am so much better in the language. I have given a lot of thought to the spline drawing method, and after seeing what has been done in the papers, I think a genetic algorithm *may* suit our purposes. I have been working on the implementation of one which I hope will be completed by Friday.

Shusheng
- This week I did some job on tracking the worm centroid from real video and collect the data using excel. I also found that it's an important problem that to get the skeleton of worm and I still work on it to find some smart method.

Colin
- This week I completed a more effective background subtraction module using the Codebooks methodology.

| Group Member | Hours Contributed |
| --- | --- |
| Sam | 10 |
| Shusheng | 5.5 |
| Colin | 10 |
| Laith | - |
| Ryan | 7 |