

## Homework 3

Robotics Seminar

CSI445/660 – Spring 2009

University at Albany, SUNY

**Due: 3/4/08 @ 4:15PM**

### Goal:

The goal of this exercise is to learn how to use the Tekkotsu vision system. We will also be getting acquainted with the Chiara. You will teach the Chiara to recognize 2 colors of dots, and output a message to stdout when it sees a dot.

### Details:

Please do the following:

- Look at sections II and III of the getting started page, to see how the Chiara differs from our AIBOs. Chiara IP addresses are 192.168.1.11# where # is the chiara number (1,2,3, or 4) (<http://www.cs.cmu.edu/afs/cs/academic/class/15494-s09/labs/lab1.html>)
- Follow the vision tutorial (<http://www.cs.cmu.edu/~dst/Tekkotsu/Tutorial/colorsegment.shtml>) to take pictures with the Chiara, segment using EasyTrain, and update your tekkotsu.xml file. I recommend calling your colors one of green, yellow, orange, pink or blue, regardless of the actual color. When the tutorial says to run getmyfile, instead do the following (from your project directory):

```
scp ms/config/mythresh.tm student@192.168.1.11#::~~/project/ms/config/  
scp ms/config/mythresh.col student@192.168.1.11#::~~/project/ms/config/  
scp ms/config/tekkotsu.xml student@192.168.1.11#::~~/project/ms/config/
```
- Test your new segmentation by loading up tekkotsu and viewing the raw and segmented camera views.
- Now, create a behavior that does the following
  - registers to listen for Vision Events related to your colors
  - sends a message to stdout, telling us the color and location, of each object recognized

### Additional Resources:

- Vision system overview: <http://www.tekkotsu.org//Vision.html>
- VisualObjectEvent tutorial: <http://www.cs.cmu.edu/~dst/Tekkotsu/Tutorial/events.shtml>