Weekly reports are to be emailed to atbecker@uh.edu by 5:00pm on Tuesdays. The purpose of a weekly report is to: (1) give you text and images for your papers, thesis, and dissertation, (2) document progress, (3) identify if you are stuck or need resources.

## Weekly report

## 1. My Goals from last week

- Write algorithmic control code for the ROS simulation
- Design better magnetic particle control

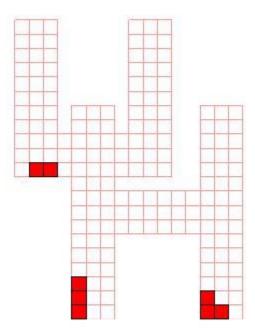
### 2. My Accomplishments this week

- a. Curved Assembly SVG's
  - Image embedded below and uploaded to Github on the Miscellaneous repository.
  - I generated a curved SVG of the polyomino assembly for Sheryl's paper in Inkscape 0.92dev with the filet option and node-generating Bezier Curves

#### b. IROS Abstract

- I tested 10 trials of ClosestFrontier3D.m to make sure that the number of moves required for the UH logo was indeed lower than the moves for exploring an equivalent number of free spaces
- I used LaTex to create the poster abstract and submit it on Papercept, PDFs have already been received in your email.

### 817 moves, 10 particles, 0 frontier Cells, 720 free cells



**Figure 1:** Screenshot of corrected 3D ClosestFrontier Algorithm. Commented out the double increment call that produced bad stuff for the abstract.

**Figure 2:** Screenshot of the svg file used for the polyominio assemby to prevent high meniscus. Works better than the previous prototype for testing out the paramagnetic particles.



### 3. My Goals for next week

- ROS Controller
- Better MATLAB control of the coils
- Find better particles
  - a. Meeting with Dr. Becker on anytime

# 4. What I need Dr. Becker to do:

- a. Have a fun 4th of July!
- b. Help us find better particles