

6.S078 Update

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1 Plan Progress

Following the comments we received after being accepted into the class, we rebroadened our search for potential products, focusing more on market viability by meeting and interacting with potential customers. We identified five major areas we wanted to investigate, and after meeting with specialists in those areas and evaluating potential market sizes, we've narrowed down the scope of our search. We have two products that we think are very promising, and are waiting to pass judgment on two other market areas pending a meeting on Wednesday with a restaurateur and local agriculture proponent and one on Thursday with the Director of MGH's Innovation and Support Center. We are meeting with Professors Gifford and Zolot on Friday to discuss our market analyses and get advice on a decision. We plan on selecting a product and beginning the design process by Friday.

The products we have narrowed down to:

- Extensions of Leap Motion. We see Leap, costing \$70 and accurate to .01 mm, as a transformational technology for interacting with computers, and think there are very strong opportunities to build products extending it. Two possible options:
 - Solution to make CAD work practically with the Leap
 - * Ergonomically impractical to work with Leap for extended periods of time (waving hands in the air) - some apparatus to hold the Leap device or your arms to make CADing with the Leap for many hours feasible
 - * Haptic feedback to make using the Leap with CAD models more useful than simply using a 3D mouse
 - Inexpensive and accurate 3D scanning using the Leap
 - * 3D printing is a huge and growing market: Forbes projects it will be a \$3 billion industry by 2016. Although this figure includes industrial applications, at CES this year consumer 3D printers had a very strong presence. It isn't unrealistic to imagine of a near future with a 3D printer in every home. The 3D scanner needs to be there too.
 - * The high accuracy of the Leap and the low cost makes it an excellent candidate to be the basis for a 3D scanning system, potentially by coupling an IMU, building a frame, or simply with software to integrate the data.
- Inexpensive LIDAR for low-cost robotics.
 - Low-cost robotic applications rapidly growing field; as measure of size, in May 2011 300,000 Arduinos out in the world
 - LIDAR extremely useful and common for serious robotic applications, but typical price of \$6k makes it inaccessible for consumer or hobbyist applications

2 Prototype Progress

As we haven't yet chosen the product we are going to produce, we do not have any prototype progress this week.