

6.S078 Update

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1 Plan Progress

After meeting with Professor Gifford last week, we started looking into 3D scanning with serious intent to pursue it. We found that while there are a number 3D scanning products out there, no products target a consumer market. We also liked that the same general technology could be applied to many different market segments, keeping open the possibility of pivoting without having to change the core technology. We discussed the possibilities and opportunities of pursuing 3D scanning as a team, and made a final decision that this is what we will focus on for this class.

We are planning to build a low-cost 3D scanner aimed at consumers, riding alongside the current excitement in consumer 3D printing. Our current vision for the target customer is a digital fabrication hobbyist/enthusiast/early-adopter, or even small-scale manufacturers (machine shops). Our main design goals are to bring resolution beyond the limit of typical machining tolerances (0.1 mm) while keeping the unit affordable (below \$500).

The plan moving forward is to continue to do market research, as well as research the currently existing 3D scanning methods. By the end of this week (2/22) we would like to have selected a few preliminary design schemes so that we can start prototyping.

2 Prototype Progress

As we have yet to select what approach we are taking to 3D scanning, we have not started building prototype software or hardware. We plan to start making progress on a prototype by the end of this week.

3 Baffling Variables

We have many, many variables facing us at the moment, but none of them stand out as more baffling than any of the others.

4 Seven Day Plan

- Continue to research methods used for 3D scanning
- Obtain access to the Stellar materials for 6.838 (Advanced topics in computer graphics: Computational Fabrication) as well as meet with the class's professor, Wojciech Matusik.
- Craig is going to make contact with his ex-employer (AutoDesk) to research what is required for 3D scanning in consumer/industrial CAD.
- Do some image reconstruction into 3D models as one means of researching the technology
- Design some potential scanner configurations
- Contact early purchasers of 3D printers to gauge interest/requirements/their use cases for a 3D scanner
- Obtain some funding for prototyping

5 People to Meet

We haven't identified anyone in particular we would like to meet at this stage (other than the professor for 6.838 listed above...we'll let you know if we have difficulty getting through to him).

6 Desired Resources

As we are hardware startup, in order to start prototyping we need some capital to purchase components. We have access to all of the facilities that we will need, but at present we lack the funding to purchase materials. In our meeting with Professor Gifford he mentioned that it would be possible to get some form of funding, such as a forgivable loan, from the course VC partners. We would like to pursue that possibility.