Assumptions, Constraints, & Dependencies

# Assumptions

* Using hardware to control the cameras will be a viable solution.
* The turntable will be able to spin constantly while photos are being taken.
* No data or photos will be lost in the process.
* Rig will be portable and easy to set up.
* Tripod will be able to support at least 2 cameras.

# Constraints

## Budget

For this project, we want to find an efficient solution while attempting to keep the price low.

## Time

Each iteration should be completed on time and have the completed milestones ready for each release.

The final project should be completed and presented at the end of Senior Design.

## Turntable

* Type – Must be electric, plugged into a standard 110V outlet.
* Weight – Must be able to turn at a constant speed up to 75 to 100 lbs.
* Speed – Must be able to rotate at a speed around 2 rpm, adjustable speed preferred.
* Cost – Must be affordable and efficient.

## Camera

* Quality – Must be a decent quality, meshing with speed to be as efficient as possible.
* Speed – Must take at least one photo per second.
* Controllability – Must have the ability to be controlled by external hardware.
* Autofocus – Must be able to quickly focus on new items placed on turntable.

## Hardware

* Cost – Must abide by the budget constraint for keeping total project cost low.
* Data transfer – Must be able to transfer data quickly and efficiently.
* Software – Must be able to run third party libraries that allow control of cameras.

# Dependencies

## Camera

Depends on the speed of the turntable selected.

Needs to be supported by selected third party library.

## Camera Control Software

Software must support camera selected.