



Laser Pointer

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Overview

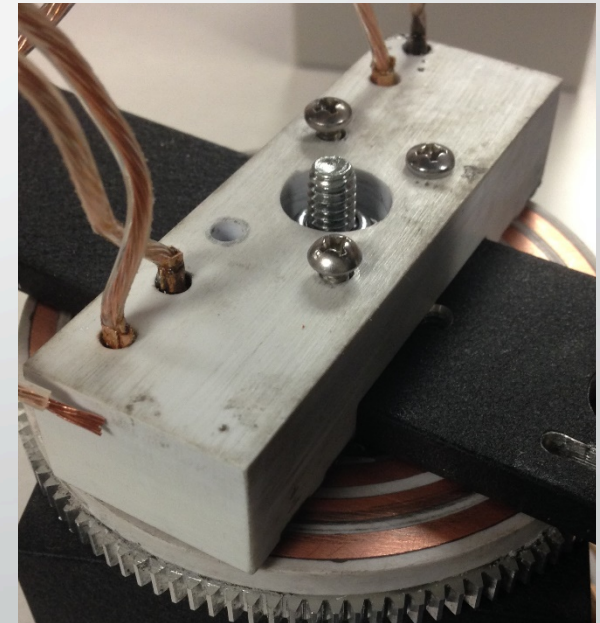
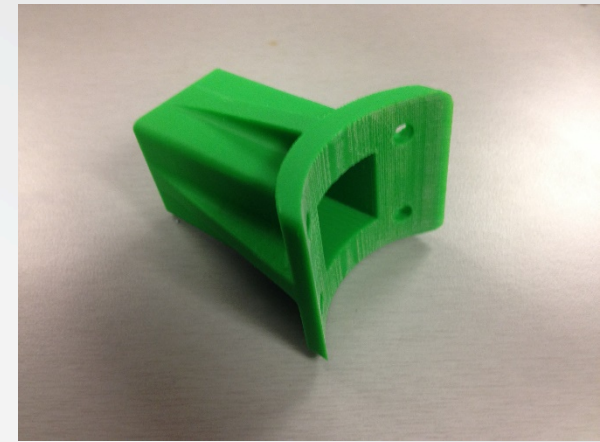
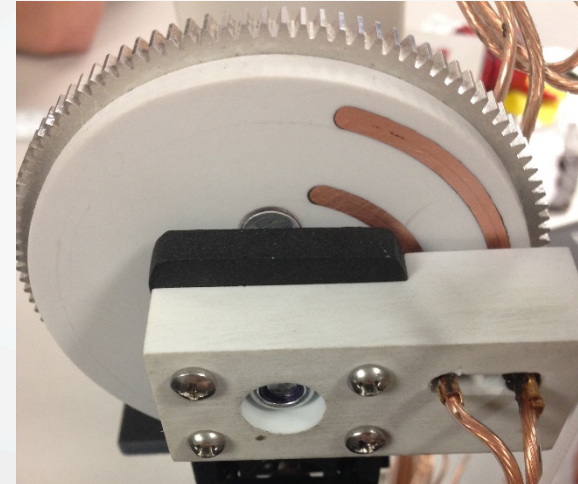
- Project Background
- Completed Components
- Design Modifications
- Remaining Task Breakdown
- Spring Schedule 2014
- Conclusion

Project Background

- **Project Goal**: Design and construct a mechanism to safely focus the attention of an audience towards individual stars or constellations while observing the night sky.
- **Client**: Mr. Edwin Anderson of the NAU physics department.
- **Pertinent Constraints**:
 - 1) Must operate in a safe manner without the risk of blindness
 - 2) Laser must toggle on/off at user command
- **Operating Conditions**: Flagstaff cold climate (minimum 5 °F) and moderate to high wind speeds (max 30 mph)

Completed Components

- Laser Housing and Conduit
- Electrical Slip Rings
- Switch Trigger
- Solenoid cover rapid prototyped



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Housing Operation

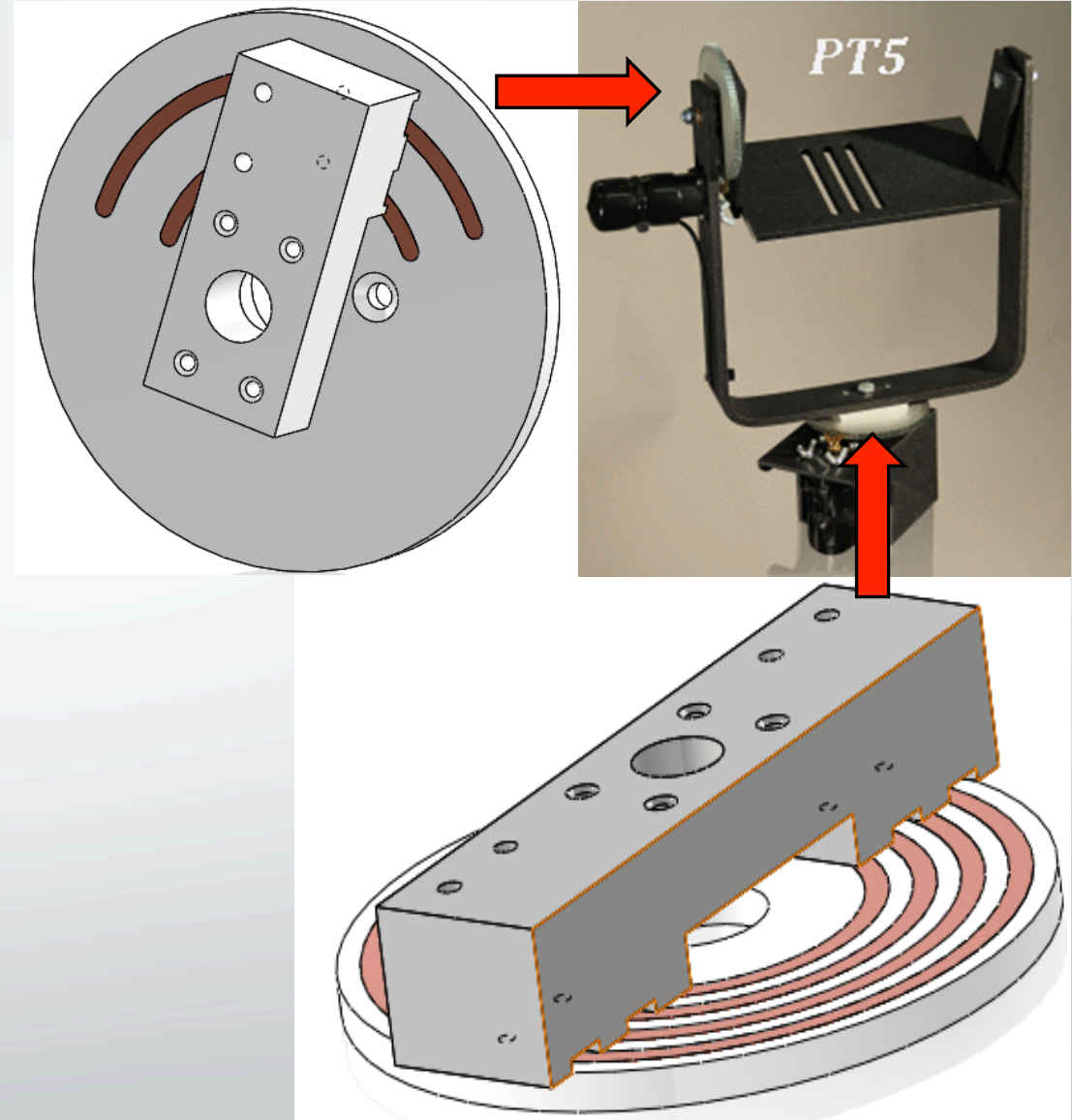


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Design Modifications

Slip Rings

- Re-Designed with diameter smaller than turret gears
- Plan to create spare parts for client



References:

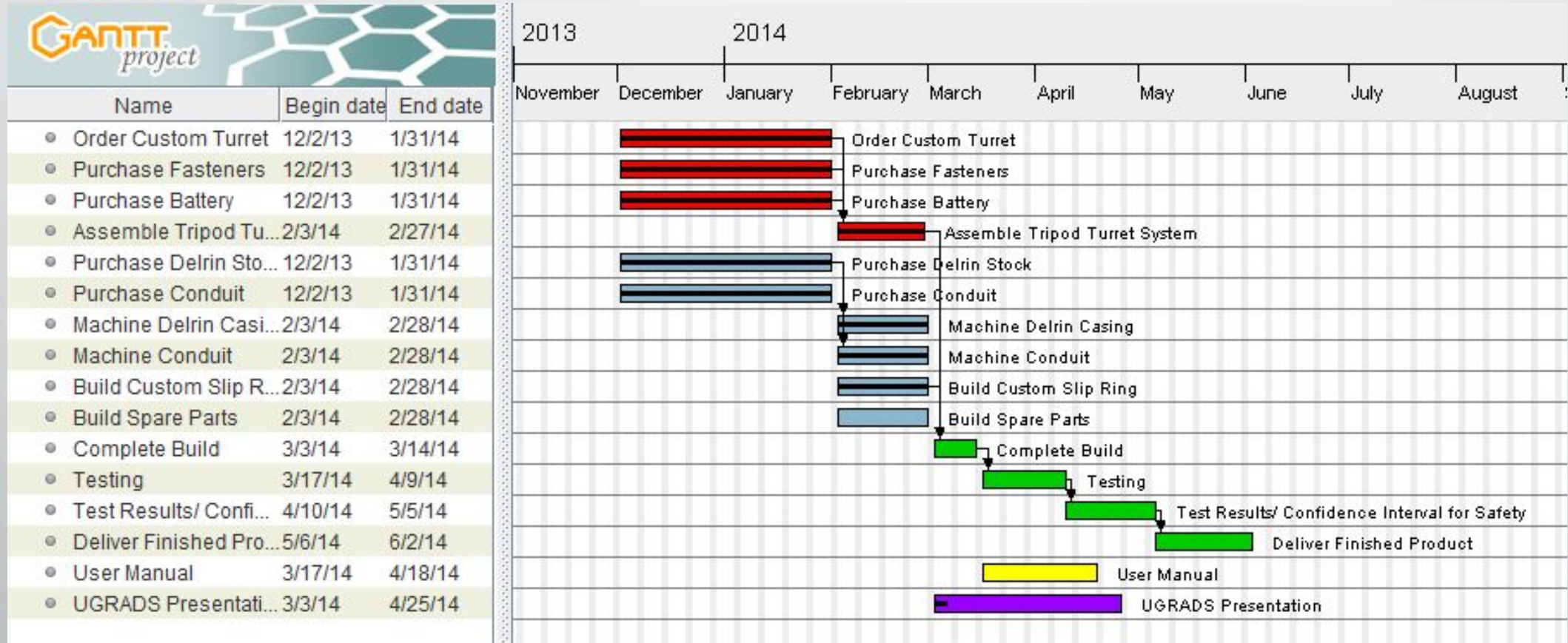
[1] "CAMERA TURRET TECHNOLOGIES, INC.." *PT5 Motorized Pan and Tilt System*. N.p.. Web. 9 Dec 2013. <<http://cameraturret.com/pt5.htm>>.

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Remaining Task Breakdown

Task	Team Member
Design/Machine Battery Box	Eddie Hoopingarner
Assemble Battery Unit	Cole Middlebrook
Machine Spare Copper Contacts	Jeb Duncan
System Assembly	Jeb Duncan
Wiring for Power Supply	Michael Orrill
System Testing	Michael Orrill
Safety Analysis	Eddie Hoopingarner
User Manual	Eddie Hoopingarner

Schedule Spring 2014



Conclusion

- **Project Background:** Laser Pointing devise for Mr. Anderson
- **Completed Components:** Laser Housing and Conduit, Solenoid Cover, Switch Trigger, and Slip Rings
- **Design Modifications:** Smaller Slip Ring Diameter, Spare Parts
- **Remaining Task Breakdown:** Spare parts, Battery Box, test, and analysis
- **Spring Schedule 2014:** On schedule: Testing in April

References

- [1] "CAMERA TURRET TECHNOLOGIES, INC.." *PT5 Motorized Pan and Tilt System*. N.p.. Web. 9 Dec 2013. <<http://cameraturret.com/pt5.htm>>.



Questions?