8.	**Project Type:** Industry Project **UCO Faculty Advisor:** **UCO Faculty Co-Advisor:** **Industry Name**: Federal Aviation Administration (FAA) **Industry Contact Person:** Jonathan Adams (jonathan.r.adams@faa.gov) **Title:** Antenna Pointer **Students:** **Abstract:** The Alaska Satellite Telecommunication Infrastructure (ASTI) team supports communication throughout Alaska. ASTI utilizes geostationary satellites for communication to earth stations in remote locations in Alaska. The satellite dishes at each earth station need to be manually pointed using multiple tools that have to be 'eyeballed' for a rough approximation of the antenna pointing. This can lead to delays in getting services setup or restored. It would be useful to have one device that could give a digital readout of the antenna pointing. **Input/output:** The prototype is an antenna pointing indicator. The input is latitude, longitude, and antenna offset. The output is the antenna elevation and azimuth. **Additional Information:** An internal team partially completed tracing system lines and developing drawings for the project. **Expectations/Deliverables:** The goal of this project is to deliver a working, tested prototype device capable of attaching to the back of a satellite dish and digitally display the current elevation and azimuth pointing of the antenna. The device should be able to accept latitude and longitude information as well as any antenna offset to provide the most accurate information. Optionally, stand for the device can be provided for performing site surveys before a dish is setup. The device must be small and light to allow easy transport by hand. The device must work off battery power and not require internet access. The device should also be resistant to high winds, rain, and below freezing temperatures common in Alaska. The device should be usable while wearing heavy gloves. **Skills Requirement:** Programming on a Raspberry Pi or other micro controller. SolidWorks or other 3D modeling program. Electrical Engineering, Mechanical Engineering, Engineering Physics **Additional Funding Available:** Yes **Potential of this project to result in an internship or full-time position:** Yes