Low-Cost Flight Simulator

FAMU-FSU College of Engineering

LOCKHEED MARTIN

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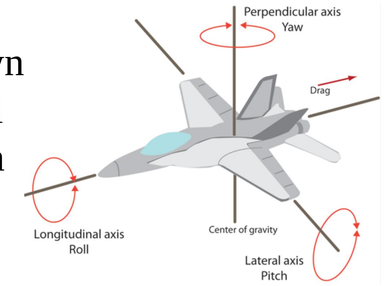
Objective

To create an assembly of F35 flight controls that integrate with Lockheed Martin's Prepar3D flight simulator software.

Background

Pitch: nose up or down
Roll: left or right roll
Yaw: left or right turn



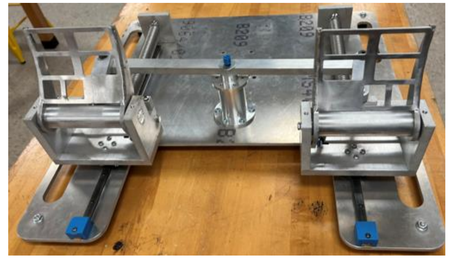
Our Design

Joystick controls pitch and roll. The stick is mounted on a gimbal joint to allow rotation in multiple directions.

Stick

Throttle controls the thrust, which is what propels the aircraft.

Throttle



Pedals transmit yaw and braking signals and utilize tension springs to return to neutral.

Rudder Pedals

Key Goals

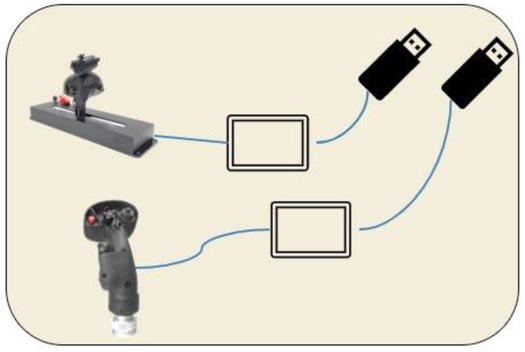
- Create finished, working prototype
- Reduce simulator equipment cost
- Compatible with desktop and with 3D printed cockpit



Future Work

We are currently prototyping our gimbal design and identifying the required buttons that will reside on the throttle and stick. Many iterations of PLA printing will commence before a final machined design will emerge.

Individual System Electronics



Required to use American-made processors to communicate with Prepar3D.