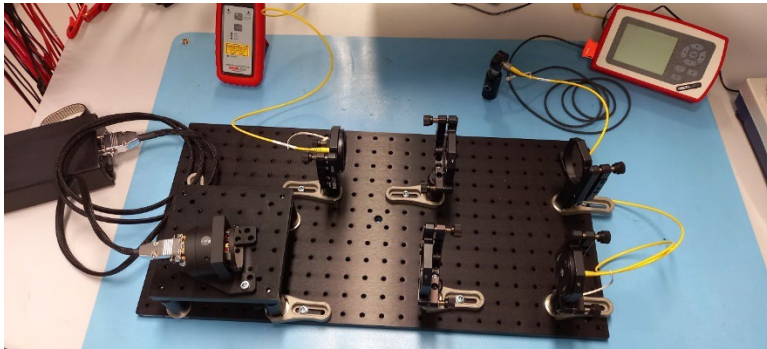




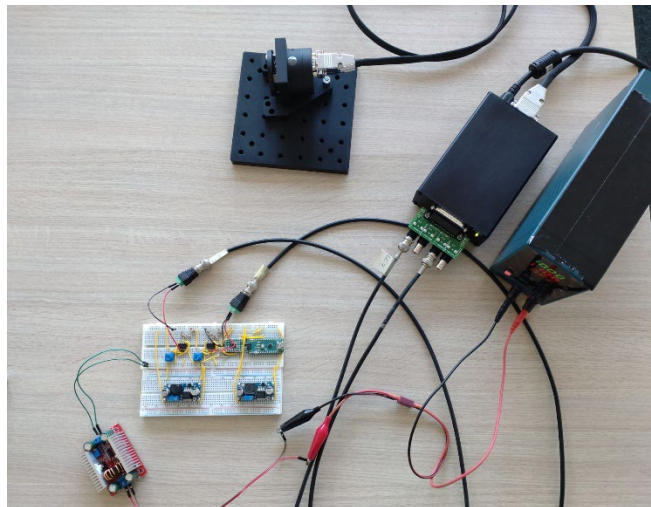
Free Space Optical Communications Testbed Joshua Spaander, AE faculty

The testbed is coming together and is already fulfilling many of the proposed functions.

Since the last update, development has been undertaken in 2 areas: fiber coupling over a distance and development of the control electronics for the FSM. Seen below is an optical setup used for achieving fiber coupling between 2 optic fibers.



Furthermore, the electronics for the FSM have also been produced now allowing for open-loop control of the FSM and easy expansion and changes by researchers. The FSM setup is shown here:



Currently under investigation is the use of photo-diodes and quad cell diodes to create closed feedback loops for the FSM.

The FSOC Testbed has found its way into wider use in education and student projects. The hardware has been demonstrated during a lecture and received great feedback from students, sparking their interest in laser communication. Furthermore, there are currently 16 students working on their own experiments and projects which are set to expand the capabilities of the testbed. There are also a number of MSc thesis's posed to begin who's research will involve use of this new facility. Lastly, contact with external groups and other researchers have been made for them to use the test bed for their experiments.