

CONCLUSION

Up to this moment the project has been developed to a point where it can successfully carry out light source tracking functions. The hardware was planned and assembled in accordance with the intended algorithm and therefore is able to function in complete compliance with the program. To overview the whole process in steps, it went as follows: Solar tracker idea was roughed out, solar tracker type, drive types and controls mechanisms were selected, a CAD model was created and the prototype parts were printed using selective laser sintering, the mechanism was assembled and equipped with hardware, a program was developed on Arduino IDE platform, the wirings and circuitry was done and the prototype was tested for functionality in the most combined way possible due to some additions required.

The system can deal with quite a few developments because in such a case the more precise a device is the better. A good mount for extra control components like Arduino and H-bridge, improved spacing between the panels, optimized and smoothed movements, transferability into a real product, etc. to mention a few.

As far as I am concerned, I think this thesis topic that I personally came up with has been perfect for me due to the wide range of expertise it included. First of all, energy and photovoltaics which I am going to dedicate my career to. Throughout this paper I have been able to conduct a great deal of study in this field and get somewhat in shape for my masters. Second of all, all the other discipline involved – Computer Aided Design (Solidworks), motor selection, setup and controls including the h-bridge motor drive, a microcontroller and its programming, setting up motor and sensor circuits on it, some exposure to 3D printing, manual laboratory work, etc.