



# INNOTECH GROUP

Matt Johnson

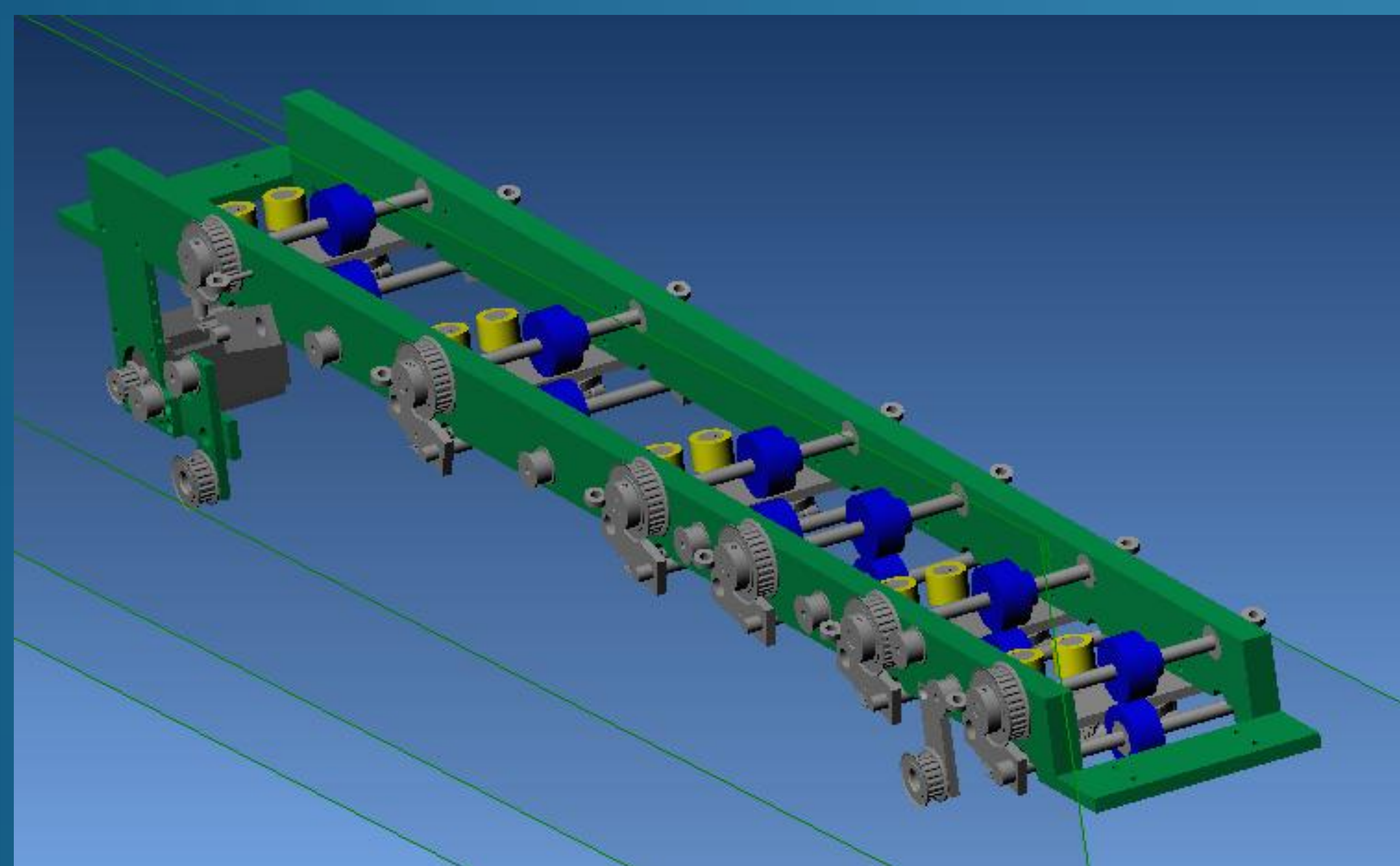
## Mechanical Concentration



Summer 2010

### The Company

Innotec Group is an engineering and manufacturing company that is based on Biblical principles. They design and manufacture a number of components for industries ranging from automotive to furniture to appliances. I worked in their LED division, which focuses on the implementation of light emitting diodes into various automotive and specialty components.



A screenshot of the acrylic strip feeder design.

### Projects

I had two main summer-long projects at Innotec. The first was to design a fixture for feeding acrylic strips of various sizes (1/8" to 1/2") through an etching booth. This fixture had to fit inside the current machine and withstand at least 50,000 parts per year of production.

The second project was to design and fabricate 6 different interchangeable aluminum plates to allow for in-line testing of each different part that this line produced. These plates allowed the machine to automatically check the light output of each part before it was annealed.

In addition to these projects, I was responsible for running and troubleshooting the machine for about 80% of my workday.

### Skills Acquired

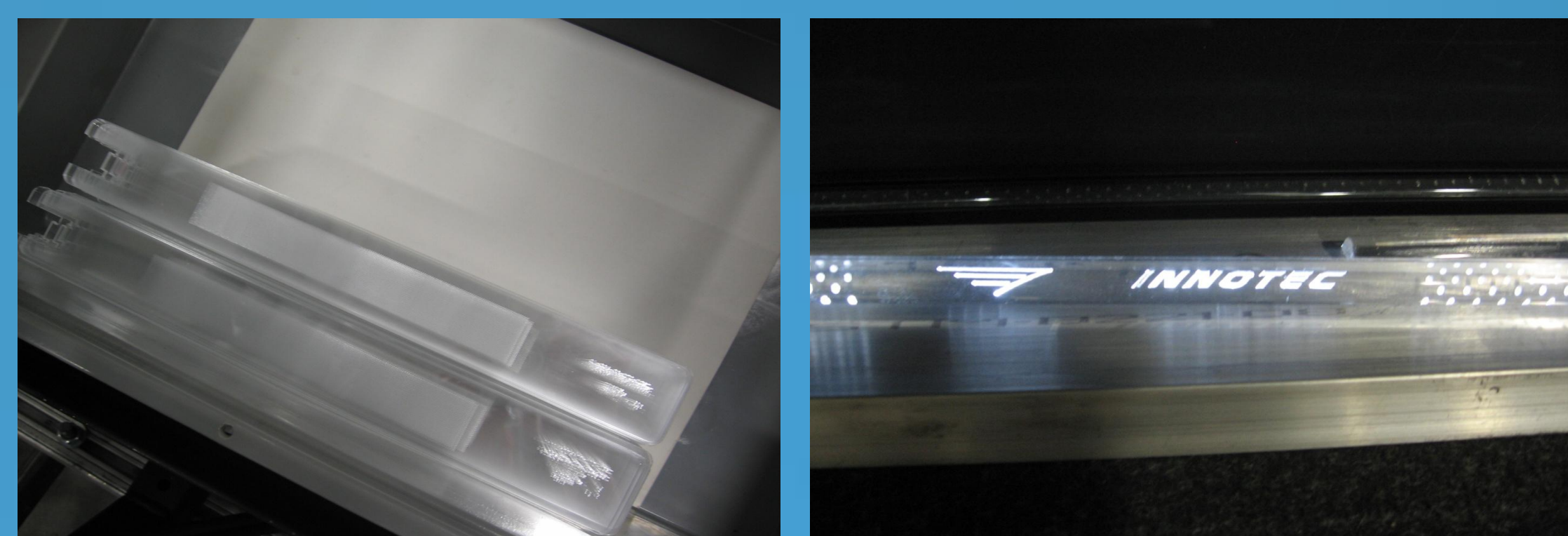
For the design of the acrylic etching fixture, I learned to use Alibre CAD, a 3D CAD similar to Autodesk Inventor. In order to make the interchangeable plates, I became proficient with a mill and refreshed my AutoCAD skills.



The light check fixture and our workaholic robot.



A finished part, partially assembled and lit by blue & green LEDs.



Two different parts made by our machine.



One of six finished light check plates.