

Peter Flowers pete@actinica.com 617.792.5451

I am an optical instrument engineer. My work melds academic training in engineering and physics with a quest for simplicity and design elegance. These basics are informed by familiarity with manufacturing methods and experience in bringing ideas to fruition.

Experience

Lasers and imagery

Laser Film Writing: optical and mechanical design, lasers, lab experiments and measurement, designed production tooling, OEM customer technical interface.

DNA Array Reader: optical design, production tooling, introduction to production, solved problems related to slide handling and holding.

Microscopy: optical design, illuminator design.

3D imagery

Plenoptic Cinema Camera: optical design and analysis support to a motion picture studio advanced development project.

Holographic Image Recorder: opto-mechanical lead, from client's lab breadboard to automated production of holograms.

Optical sensing

Hand Held Sniffer: light collection design using non-imaging optics.

Mid-IR Spectrometer: optical and mechanical design, lab experiments; this thumbnail sized spectrometer was intended to be incorporated into a drill to look for water on Mars.

Carbon Dioxide Sensor: optical design, molded plastic prototyping.

Mechanical design engineering, instruments, industrial equipment

Resonant Optical Scanners: mechanical design of stiff and light structures.

DNA Spotting Mechanism: mechanical invention, customer interface.

Space Flight Optical Scanner: mechanical design, extensive lab fabrication and measurement, dramatically improved sensor stability.

US Patents

4,694,235 Capacitive Position Sensor 5,123,024 Laser Diode Light Intensity Control

6,269,846 DNA Array Spotter 6,722,395 DNA Array Spotter

7,777,887 Absorption Spectroscopy Apparatus

Education

BS Mechanical Engineering, Northeastern University, 1970

Graduate Courses, Applied Physics, UMass Boston, 1980's

Employment

Xerox, Peace Corps, Rock&Roll, Taylor Instrument, Computer Devices,

General Scanning, Genetic Micro Systems (start up), Actinica (engineering consulting)