

LEONARD HARPSTER

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MECHANICAL ENGINEER

Experienced Mechanical Design Engineer with a diverse career of 9 years focused on mechatronics and design. Efficient collaborator able to move projects forward in a technically sound manner via innovative low-cost solutions, a bias towards action, and an optimistic, curious, outlook.

EXPERIENCE

HP INC., Vancouver, WA

August 2013 – September 2019

Mechanical Design Engineer

System designer of four cost-reduced, reliable and acoustically exceptional drive systems in two of the industry's first PageWide office copiers from cradle to post-launch as well as a design engineer on the industry's first color-capable Multi Jet Fusion 3D printer.

- Enabled for the first time at HP a risky but cost-effective fixed center-to-center belt architecture in 20+ belted drives for a landmark PageWide 2D printer by designing a belt tester and test suite to tune and prove feasibility.
- Delivered innovative electrical drives which exceeded original goals using tricks like a spring-loaded four-track cam-gear, hyper-compact drives spanning the greatest tolerance stack-up in the entire 3000+ part printer, which also needed no fixtures or tools to assemble.
- Designed and implemented many improvements in the MJF 580 3D printer including a new harsh environment humidity system water level sensor (greater robustness), powder dispense carriage spring redesign, and plastic injection part design to reduce part count and cost. Proposed, designed, and vetted a control system re-architecture to save \$100+ per printer sold.

PANASONIC, San Diego, CA

July 2012 – August 2013

Mechanical Engineer

- Owned the mechanical design of a line of OEM Whirlpool printers that featured a new 7-pivot flush-fit hinge design and overcame a number of safety and design challenges that arose
- Designed unexpected ID improvements which delighted marketing as well as customers.
- Troubleshoot a door sagging issue across the whole platform in the factory in Mexico with no delay in shipments or costly design changes.

KURT LUND CONSULTING, San Diego, CA

February 2011 – July 2012

- Flight recorder, silicon reactor, and electric motor simulation. Optical 3DOF test-mount design.
- Re-Designed a high temperature glass valve to be half the size with no performance penalty.

SKILLS

PTC Creo, SPC, DFA, DFM, Plastic Injection Part Design, Sheet Metal Part Design, Root Cause Analysis, System Engineering, Design for Serviceability, Flexscript, MATLAB, Python, GD&T

EDUCATION

Bachelor of Science (BS) in Mechanical Engineering, University of California San Diego 2010