

## **Tedd McHenry, P.Eng.**

12590 56 Avenue  
Surrey, BC V3X 2Y6  
(604) 724-2230  
engineering@mchenry.ca

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### **Introduction**

Tedd McHenry is an experienced designer of mechanical and electronic equipment with 19 years of engineering experience in the medical, commercial printing, telecommunication, and nuclear power industries. He has designed precision production tooling, mechanical, electromechanical, and pneumatically-driven devices, and electronic equipment.

### **Summary of Qualifications**

- Proven mechanical design ability. Designed and developed non-invasive therapeutic devices. Designed and developed precision jigs and fixtures for the production of biopsy probes. Designed and developed plate-transport mechanisms and components for computer-to-plate printers. Designed and developed all mechanical aspects of numerous telecommunication equipment platforms (responsibilities included chassis design, thermal analysis and testing, shock and vibration testing, and reliability analysis).
- Broad experience in mechanical engineering and related fields. One and a half years experience managing a mechanical prototyping operation. Six years experience in nuclear safety systems analysis and nuclear plant construction engineering.
- Proficient with software design tools: SolidWorks CAD software; Solid Designer CAD software; and Flotherm thermal analysis software. Experience developing product graphics with Adobe Illustrator and Photoshop.
- Highly-developed written and oral presentation skills. Three years experience developing technical documentation and training technical writers in the use of publishing and online development tools.

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### **Related Technical Skills**

#### **Engineering**

- Mechanical design and CAD
- Thermal analysis and testing of electronic devices
- EMI minimization
- Shock and vibration testing
- Reliability analysis

#### **Tools and Systems**

- 3D CAD: SolidWorks, Solid Designer
- Thermal analysis: Flotherm
- Operating systems: UNIX, Windows, MacOS
- ERP: SAP and Oracle
- Project management: Microsoft Project
- Product graphics: Adobe Illustrator, Adobe Photoshop

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## Professional Experience

### President and Engineer

McHenry Engineering Ltd., 2003–Present

Founded McHenry Engineering Ltd. in 2003. Developed designs and products for Dyaptive Systems Inc., KLN Klein Product Development, Zeugma Systems Inc., Agilent Technologies Canada Inc., Angiotech Pharmaceuticals, and StarFish Product Engineering. (See below.)

### Senior Mechanical Engineer

StarFish Product Engineering Inc., July 2010–Present

Design and develop non-invasive therapeutic devices. Designed and developed a voice coil actuated tendon stimulator as part of a stroke therapy device. Designed, fabricated, and tested various related test fixtures and devices. Design miscellaneous other mechanisms.

### Design Engineer

Angiotech Pharmaceuticals, Inc., 2009–June 2010

Designed and developed precision jigs and fixtures for the production of biopsy probes. Fabricated and test prototype jigs and fixtures, tested designs, and analyzed results.

### Manager—Prototype Centre

Kodak Graphic Communications (formerly Creo), 2008–2009

Managed a team of 19 shop managers, machinists, machine operators, and technicians to produce prototype mechanical parts and assemblies for product-development teams. Developed a rapid-procurement system for prototype parts not made in-house, including various classes of mechanical components as well as PCB assemblies, cabling, and optical components.

- Defined and measured metrics of operational performance and implemented numerous process changes to speed delivery of prototypes to product-development teams.
- Decided on priorities and strategies, to be implemented by the shop managers, to ensure that the requirements of the product-development teams were appropriately met with available resources.
- Prepared budget projections and made staffing and resource recommendations to the operation manager.

### Design Engineer—Mechanical

Kodak Graphic Communications (formerly Creo), 2006–2007

Designed and developed mechanical systems and components for computer-to-plate printers for the offset printing industry. Designed pneumatically-driven, electronically-controlled mechanisms to handle delicate plate media (light-gauge, emulsion-coated aluminum plates).

- Developed an easily-retrofittable modification to a plate-handling mechanism that solved a long-standing customer problem with very thin plates.
- Took over the development of a critical plate-handling sub-system and designed a simple, highly-effective “gripper” mechanism that enabled the handling of plate sizes that the system could not previously handle. This significantly expanded the product's market potential.

**Design Engineer—Mechanical**

Agilent Technologies/Hewlett–Packard, 1997–2003

Sole mechanical design engineer for the division. Designed and developed chassis, instrument cards, and all other mechanical components of telecommunications test instruments. Planned, supervised, and participated in all mechanical testing of new designs, including shock and vibration, thermal, and usability testing. Assisted EMI testing and regulatory approval.

- Designed an all-new mechanical platform for network test instruments. The platform subsequently became the basis for three product families in three different divisions.
- Designed portable version of same test platform in six months (concept development to first customer shipment).

**Learning Products Developer**

Hewlett–Packard, 1994–1997

Developed state-of-the-art online help systems for telecommunication and digital video protocol test software. Developed and conducted training on learning product development software tools. Wrote user and programmer guides for telecommunication and digital video protocol test hardware and software.

- Designed a comprehensive online help system for the Emmy-award-winning MPEGscope Test System

**Pilot—Canadian Forces**

Department of National Defence, 1987-1994

Trained and instructed student pilots to “wings” standard on the CT-114 Tutor jet. Flew search and rescue missions, and missions in support of arctic operations, in the CC-138 Twin Otter. Managed publication of the Plainsman, base newspaper of CFB Moose Jaw.

**Nuclear Systems Engineer**

Ontario Hydro, 1981-1987

Analyzed the reliability of safety systems for CANDU nuclear plants. Evaluated the effectiveness of proposed modifications to CANDU safety systems and made recommendations. Participated in the planning and performance of CANDU safety system tests, especially vacuum containment system leakage tests. Assisted in the planning of major maintenance operations on CANDU reactors.

- Designed the operations centre for a major remote-tooling maintenance operation.

**Academic and Military Achievements**

**Bachelor of Applied Science,  
Mechanical Engineering**  
University of Toronto

Final electives: direct energy conversion, combustion theory, instrumentation design, control systems theory

**Officer Training**  
Department of National Defence

Military leadership, oral and written French, electronic warfare technology and tactics, military law and administration.

**Pilot Training**  
Department of National Defence

Jet instructor training, search and rescue training, aerodynamics, meteorology, navigation, aircraft systems, flight procedures.

References available on request.