

James McHugh

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Summary of qualifications

Northrop Grumman Capture Leadership Academy, MD

MBA, Bentley College, Waltham, MA

M.S.E.E., Tufts University, Medford, MA

B.Sc. E.E., University of Glasgow, Scotland

Work experience

Northrop Grumman Corporation

2009-Present

Woodland Hills, CA 91367

Program Manager

Responsible for the Profit and Loss of a \$30M+ Product Line with significant year on year Sales growth. Managed multiple Customer negotiations, including Long Term Agreements and setting Commercial Price Points. Responsible for Managing the Supply Chain, Operations and Engineering Development Teams of the Product Line, as well as managing to Operating Margin Division Requirements. Traveled extensively, including internationally, to secure existing customers and grow new customer accounts. Presented at Trade Shows and both internal and external Product Briefings. Developed significant application experience with EO/IR Surveillance, Radar Pointing, Missile Technology and Pipeline Inspection.

Teradyne, Inc.

2000-2009

Agoura Hills, CA 91376

Supply Line Manager – Signal Delivery (2006-Present)

Responsible for all aspects of establishing a supply chain for the New Product Introduction of signal delivery components across Teradyne's semiconductor test instruments. This requires engagement with design engineering from the earliest concept phase, providing cost models and identifying suppliers that can meet both the technology requirements and provide a rampable supply chain, supporting lean manufacturing and delivery with managed cost, inventory and liability contracts. Specific deliverables that I am responsible for include:

- Project management of supplier programs

- Cross-functional team leadership to develop supplier technical and commercial requirements
- On-time delivery of product to support the early product ramp of Teradyne's test instruments
- Independent cost modeling
- Requests for proposal and supplier selection
- Business development contracts, Statements of Work and Master Supplier Agreements
- Managing the supplier during development and early production
- Managing the technology development process with suppliers and internal cross-functional teams
- Identifying new suppliers or technologies
- Formal mid-term technology exchange meetings with key suppliers on a regular cadence.

New Product Introduction (NPI) Manager (2003-2006). Managed a cross functional team of test development engineers, manufacturing engineers and material planners to achieve product launch, on-time and at cost, yield and reliability goals for ATE system instruments, including high power (6V, 160A), medium power (15V, 36A) and high density digital (192 channel) instruments. The products were launched at a Contract Manufacturer (CM) located at a remote site. Instrument ramp was best in class for time to yield and improved on cost goals by 20%. This work required detailed schedule management, including Earned Value Analysis and Risk Management and co-ordination with the design and CM teams. Implementation of DFM, DFA and MRP Management, as well as detailed ECO management and implementation.

Boston, MA 02118

Manager of Test Development Engineering (TDE) for Teradyne's ICD division building ATE equipment for the mixed signal semiconductor fabrication market. This position included managing a department of 35 TDE, including a staff of 4 managers. The range of technologies tested by the department included: microwave (10MHz-6GHz) VNA, high power (100V, 10A) power supplies, low jitter clocks (<1.5psec jitter), broadband AC instruments (15MHz, 150dB dynamic range, source and digitizer) and high speed (3Gbps) SERDES test solutions. In this position, I reported to the director of operations and grew the department from 15 engineers to 35 in 9 months, created a tiered management structure and ensured the successful launch of Teradyne's Tiger ATE system (ASP \$3.5M with up to 1024 channels of 1.6Gbps digital channels and analog instruments described above).

GenRad, Inc.

Westford, MA 01886

1997-2000

Manager of Test Development Engineering for GenRad's high-end functional ATE test systems. Managed an average of eight engineers writing custom software applications in C, using GenRad's Geneva functional test platform and Encompass test executive. Responsibilities included managing department budget (\$1M), hiring, mentoring and terminating engineers, creating department processes and metrics, quoting cost of applications, preparing project plans (SOW, budget, system configuration, etc), managing individual projects and ensuring appropriate support was provided to all department projects. This position required extensive travel and presentations to customers as well as working closely with sales groups and manufacturing groups to close sales and deliver systems. Typical project duration was 3-4months. The range of technologies that test applications were written for (and custom interface circuits were designed for) included: telecommunications (routers, line cards, modems, optical and copper interfaces to ATM and DS-3 systems), medical (pacemakers), automotive (body controllers, remote keyless entry) and a range of industrial products.

Melles Griot, Inc.

Auburn, MA 01501

1996-1997

Principal Development Engineer. Designed circuits and wrote extensive test software for the evaluation and final test of optoelectronic telecommunications devices. Technical project manager for the design and development of a telecommunications 980nm pump laser. This included developing specifications, negotiating procurement of key components, developing and implementing the reliability and manufacturing plans. Designed and developed an 800MHz modulated laser driver circuit for use in CD-ROM drives. Project manager for the design and fabrication of a custom IC with 300mA drive current and modulation to 700MHz. Designed key equipment such as a laser welder delivery head, burn-in fixtures and test equipment. Designed equipment and the process for high coupling efficiency fiber polishing. Wrote test software and data analysis software in Labview and Visual Basic. Prepared several budgets and presentations for customers, senior managers and suppliers.

Lasertron, Inc.

Burlington, MA 01803

1989 - 1996

Project manager/design engineer responsible for the design and development of a broad variety of in-house capital equipment including: dispersion penalty test stations (for 2.5Gbit devices), automated fiber-polishing station, auto-aligner fiber coupling equipment, fiber coupled Nd:YAG laser welder manufacturing stations using CCD viewing system and pinFET receiver automated test station. These projects included extensive electronics (analog, digital and r.f.), optical and mechanical design, as well as writing control software in C for DOS and proprietary software in MS windows. In addition to project planning and capital budgeting I was also responsible for hiring a

series of contractors to work on particular tasks together with having several PC boards made and interacting with both in-house and outside machine shops and vendors. As well as these primary duties, I was also responsible for process control engineering for the in-house detector fiber preparation manufacturing line, requiring extensive experience writing ECO's, route sheets and manufacturing process procedures and working closely with manufacturing personnel. I was also a member of Lasertron's team of in-house ISO9000 auditors.

Candela Laser Corp.

Wayland, MA

1987-1989

Development Engineer. Designed commercially released LS-2 grating wavemeter with IBM PC computer interface written in pascal and using a broad spectral range diffraction grating. Brassboarded a 23J dye laser and a dye-laser pumped dye-laser. Developed a 10,000J/s isolated output capacitor charging power supply.

Thackray, Inc.

Woburn, MA

1983-1987

Development Engineer. Established test and repair facility as part of subsidiary start-up. Developed and modified endoscopes for arthroscopy and nephroscopy. Developed program written on a microcomputer for process control of artificial hip-joint manufacture.

Tronicair Ltd.

Kilsyth, Scotland

1981-1983

Manufacturing engineer responsible for QC, repair and development of solid state HVAC temperature controllers.

Training

Graduated from the Northrop Grumman Capture Leadership Academy (2016); Earned Value Program Management; Presented Technical Paper at the Northrop Grumman ES Symposium: Stochastic Processes in LN-200 Product Reliability; Graduate classes at Ohio University in Inertial Engineering and GPS Engineering; Presented paper "Built In Self Test for Rapid Product Ramp" at Teradyne Technology Conference, 2007; APICS Certification Training, BDI – DFMA and DFMA training, Teradyne TQM Training (7 Step, 9Step, Root Cause Analysis, Meetings Management), Teradyne Advanced Project Management, Webplan User Training, Presenter- GenRad Global Technology Conference, 1999; Strategies for Selling Industrial Products (AMA), 1999; ATE Test Techniques (Nepcon), 1999; Boundary Scan (Nepcon), 1999; Object

Oriented Programming using the UML (IEEE), 1998; Performance Appraisal Management (AMA), 1998; DSP Training (Besser), 1998; Team Leadership (AMA); Visual Basic 4.0 Programming, 1997; ISO9000 Auditing, Lasertron, 1995; Advanced AutoCAD Seminar, 1994; SPICE modeling 1993, RGA Associates; Opto-mechanical design, SPIE Short Course, 1992; ANSI Y14.5M GT&D, Lasertron, 1991.

Software

ARM (Active Risk Management) Tool, Primavera, MS Project, Solidworks, Cadence Concept & PSPICE, Matlab, National Instruments/CVI, Encompass Test Executive, Oracle, MS Project, AutoCAD, LabVIEW, Visual Basic 4.0, Microsoft C, Borland Pascal, 80x86 and 6502 assembler, MathCAD, MS Access, MS Word, MS Excel.