

Patrick R. Turner, EdD

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6164 Wertz Street
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EDUCATION

- EdD** Ferris State University, Community College Leadership May 2021
Dissertation: “Technology Improved Campus Safety: Wireless Network-based
Campus Police Incident Response, Person of Interest and Witness Identification,
Potential Victim Protection, and Contact Tracing”
Committee: Dr. Tracy Russo (chair), Dr. Steven Hundersmark, Daniel Heidt
Graduated Summa Cum Laude – GPA: 4.0/4.0
- MS** Massachusetts Institute of Technology, Mechanical Engineering May 1985
Thesis: “Quasi-Static Analysis of a Four Wheeled Vehicle During Combined
Maneuvers.”
Advisor: Karl Hendrick
- BS** Michigan Technological University, Mechanical Engineering June 1981
Graduated Magna Cum Laude
Multi-course Senior Design Project: Design of Cylindrical Assembly Robot
- AS** Saint Clair County Community College, Engineering June 1978
Graduated Magna Cum Laude
Minored in Mathematics
- Cert** Moody Bible College, Ministerial Studies (Two Year Program) July 2011
Graduated Summa Cum Laude

HONORS AND AWARDS

Technology Demonstration to White House Staffer – E-Star Award 1997
Selected to present technology demonstration to Thomas "Mack" McLarty, counselor to
President Clinton and former White House Chief of Staff, regarding presentation of the U.S.
Dept. of Commerce E-Star Award to Mechanical Dynamics, Inc. for successful global
competition. Ann Arbor News, Ann Arbor, MI. July 29, 1997.

US Patent No. 5,297,057 1994
Method and Apparatus for Design and Optimization for Simulation of Motion of Mechanical
Linkages. Based on work at Schlumberger CAD/CAM in collaboration with SPAR Labs
(Schlumberger Palo-Alto Research).

Letter of Congratulations from Bob Carr, Member of the US Congress – July 19, 1985

Congratulations Letter on graduation from Massachusetts Institute of Technology.

Appeared on ‘Motor Week’ Televisions Original Automotive Magazine 1985
Appeared as General Motors on-air representative for Motor Week’s® segment titled,
‘Computers in Engineering at General Motors’ (Hosted by John H. Davis), Aired in 1984-85.

General Motors Fellowship 1983-1985
Full support to attend MIT (Massachusetts Institute of Technology) Master of Science in
Mechanical Engineering Program.

Phi Kappa Phi and Pi Tau Sigma Member 1980
National Higher Education Academic Honor Society Organizations

President of Tau Beta Pi - Michigan Beta Chapter 1979-1980
National Higher Education Engineering Honor Society

Forging Industry Educational and Research Foundation Scholarship, 1979-1980
Marathon Electric Manufacturing Scholarship,
Michigan Tech Student Fund Scholarship
Scholarships Awarded based on academic performance and campus participation.

President of Saint Clair County Community College Engineering Society 1978
Engineering Honor Society Organization

RESEARCH EXPERIENCE

Dissertation, Ferris State University, Big Rapids, MI 2021
Advisor: Dr. Tracy Russo
Title: “Technology Improved Campus Safety: Wireless Network-based Campus Police
Incident Response, Person of Interest and Witness Identification, Potential Victim
Protection, and Contact Tracing”

General Motors, Pontiac, MI and University of California, Berkley, CA 1986 to 1987
Position, Research Sponsor and Coordinator

- Variable Valve Train Research for GM 2.5L four-cylinder automotive engine.
- Compare cycle-limited hydraulic lifters and various valve mechanism designs.

General Motors, Pontiac, MI and Ricardo Engineering, England 1986 to 1987
Position, Research Sponsor and Coordinator

- Variable Valve Train Research for GM 2.5L four-cylinder engine
- Compare various variable cam profile approaches and mechanism designs.

Master’s Thesis, Massachusetts Institute of Technology, Cambridge, MA 1983-85
Advisor: Dr. Karl Hedrick
Title: “Quasi-Static Analysis of a Four Wheeled Vehicle During Combined Maneuvers”

- Developed computer simulation used very early in automobile design

INNOVATION EXPERIENCE

Schoolcraft College, Vice President and Chief Information Officer, Livonia, MI – 2017-2021 – Conceived and led development of integration of wireless network technology and student information systems for improved campus safety. Led to current DCCL Dissertation.

Schoolcraft College, Vice President Chief Information Officer, Livonia, MI – 2015-2019 – Conceived concept and worked with VMware® Inc. and Ellucian® Inc. to develop Digital Backpack™ Higher Education product enabling new remote access to tech heavy classes. Expanded online/remote course delivery including those typically only available on campus.

Schoolcraft College, Chief Information Officer, Livonia, MI – 2015 – Invented Data Center Design and Operations CRIMMPT™ Strategy. CRIMPP – Creates focus on Capacity, Redundancy, Infrastructure, Maintenance, Monitoring, and Policy as critical considerations for all major systems. Led to development of continuing education classes at Schoolcraft.

Liberty Center One, LLC, Chief Technology Officer, Royal Oak, MI – 2012 – Use of low-cost data center cold aisle containment using PESG 4'x8' plastic and Unistrut dolly system. (1/10th cost of commercial cold aisle containment product)

Web Elite, LLC, Chief Technology Officer, Royal Oak, MI – 2009- 2010 – Led development of a novel data center monitoring system via dry contacts, A/D converters, and web software resulting – 1/8th cost of commercial product and approached by large HVAC Mfg. to commercialize the idea.

Web Elite, LLC, Chief Technology Officer, Royal Oak, MI – 2006 – Helped develop and led creation of WE-Present computer-based training authoring system. New line of business.

Web Elite, LLC, Chief Technology Officer, Royal Oak, MI – 2004 – Novel strategy led to having one of General Motors, Inc. top 5 uptime apps through layered monitoring. Result was continued GM business when executive VP consolidated all but seven IT vendors.

Schlumberger CAD/CAM, Inc. Engineering Manager. 1987-88 – Developed new process for Schlumberger Modal Analyzer results integration with Bravo3™ Finite Element Analysis for product design – expanded market with new product.

Schlumberger CAD/CAM, Inc. Engineering Manager. 1987-88 – Developed process to integrate ADAMS™ large displacement analysis results with Finite Element Analysis automating quasi-static analysis design studies. Resulted in increased sales in Japan.

General Motors, Inc. Project Engineer. 1982 – First GM use of modal synthesis analyzer to study placement of tuned-absorber to solve engine cradle noise and vibration problem.

General Motors, Inc. Project Engineer. 1982 – Novel use of SPICE™ circuit analysis tool to model a mechanical system. After performing a theoretical translation of a 2.5 liter X-Car

automotive engine system to an equivalent electric circuit, accurately simulated an off-idle full car surge vibration. Proved engine fuel throttle body injector response impulses excited surge. Also proved mechanical stiffness or mass changes were not practical solutions. Resulted in engine control team “detuning instantaneous throttle body injector performance.”

General Motors, Inc. Project Engineer. 1982 – Resolved 1982-83 Pontiac Fiero interior noise issue by developing novel vibration-isolating cooling line car body mounts/supports.

TEACHING EXPERIENCE

Schoolcraft College, Livonia, MI September 2015 to December 2017

Adjunct Professor, Continuing Education in Computer and Information Systems

- Taught Data Center Design, a course covering data center design concepts of capacity, redundancy and infrastructures for major facility systems including power, cooling, networking, security (both networking and physical) and building/floorplan infrastructure.
- Taught Data Center Operations, a course covering data center operations including monitoring, maintenance, and operational policies for major facility systems; power, cooling, networking, networking and physical security as well as building infrastructure. Policy focuses on putting controls in place to assure compliance with information technology and security audit standards.
- Developed and taught original course material based on commercial experience.

The River, Holly, MI & **Faith**, Waterford, MI September 2008 to December 2015

Instructor, Continuing Education

- Developed six 6-7-week courses on theological topics – taught courses, 2008 to 2015
- Developed course and taught eSword® software usage & strategy for five years.
- Developed original content for eSword® study and research software system.

PUBLICATIONS

Journal Publications

Turner, P. R. (2020, November). 'Emerging leader perspective: Community college entrepreneurship during the pandemic.' *Perspectives*. Ferris State University.

Turner, P. R. (2020, September). 'Increasing remote access to tech heavy classes for all student populations on simple personal devices.' *Learning Abstracts*, 23(9). League for Innovation in the Community College.

Turner, P.R., 'Integrating Finite Element Analysis with Quasi-Static Loadings from a Large Displacement Dynamic Analysis' *Mechanical Engineering Systems Magazine*, Auerbach Publishers, September/October 1990.

Turner, P.R., 'Integrating the Mechanism Optimal Synthesis Tool into the Mechanical Design Industry' *Proceedings of the Society of Manufacturing Engineers, AUTOFACT '89 Conference and Exposition*, Detroit, Michigan, Oct. 1989.

Turner, P.R., and Bodner, M.E., 'Optimization and Synthesis for Mechanism Design' SME paper no. MS88-711, Proceedings of the Society of Manufacturing Engineers, AUTOFACT '88 Conference and Exposition', Chicago, Illinois, Oct. 1988.

Conference Papers

Turner, P. R., Heidt, D. (2019). 'Wireless Transformation, Security Analysis, Student Safety.' Merit Member Conference. Dearborn, Michigan, May 8, 2019

Turner, P. R., (2019). 'ETHOS Powers the Ellucian® Connector™ for Lab Computer Access from Anywhere with the VMware® Digital Backpack™.' Ellucian Elive Conference Session EL252784, April 7-10, 2019. New Orleans, Louisiana

Turner, P. R. (2017). 'Leadership, Workplace Engagement & Key Skills for Driving Change' Ellucian GLUG (Great Lakes Users Conference). September 25, 2017

Turner, P. R., Grewe, J. (2017). 'Any App on Any Device: Higher Education Digital Backpack And The New VMware Connector For Ellucian.' Ellucian GLUG (Great Lakes Users Conference). September 25, 2017.

Turner, P. R., (2017). 'The Enterprise IT Security Portfolio: A Technological Survey. Secure World: Surviving the Siege.' Secure World Conference, Dearborn, Michigan. September 13, 2017

Turner, P. R., Blackstone, C, Heidt, D. (2017). 'Hosted Virtual Desktop Computing as a Managed Service. in Higher Ed.' Merit Member Conference. May 17, 2017.

Turner, P. R., Merrion, D., Grewe, J. (2017). 'Making the VMware Digital Backpack for Higher Education a Reality: A CIOs Case Study.' Merit Member Conference. May 16, 2017.

Turner, P. R., Winn, P. (2017). 'Any App On Any Device Powering The Digital Backpack With The VMware Connector For Ellucian.' Ellucian eLive Conference. Orlando, Florida. March 19-22, 2017.

Turner, P. R., (2016). 'Data Center Operations and Management (2-Hour Session).' Data Center World. New, Orleans, Louisiana. September 12-15, 2016.

Turner, P. R., (2016). 'The Enterprise IT Security Portfolio: A Technological Survey.' Merit Cyber Range Conference and Merit Member Conference. Ann Arbor, Michigan. May 10-12, 2016.

Turner, P. R., (2016). 'Schoolcraft College VSI and VDI IT Infrastructure Overhaul.' 2016 VMware CIO Symposium for Higher Education, VMware, 3401 Hillview Avenue, Palo Alto, California, April 6, 2016.

Turner, P.R., 'BravoMOST - Optimal Synthesis for Mechanism Design' Fleximation '89 Proceedings, HTL Brugg-Windisch technical college, Switzerland, June 6-8, 1989.

Turner, P.R., 'Integrating Experimental and Finite Element Method Modal Analysis' AUG Users Group Conference Proceedings, Tampa, Florida, May 21-25, 1989.

Turner, P.R., 'Integrating Finite Element Analysis with Quasi-Static Loadings from a Large Displacement Dynamic Analysis' Proceedings of The MacNeal-Schwendler Corporation World Users Conference, Universal City, California, March 13-17, 1989.

Turner, P.R., 'Integrating Finite Element Analysis with Quasi-Static Loadings from ADAMS™ using the SCHLUMBERGER BRAVO3™ System' Proceedings of the INTERNATIONAL ADAMS USERS' CONFERENCE, Ann Arbor, MI, Sept. 1988.

Turner, P.R., 'Workstation Integration for Large Displacement Mechanical Analysis' Course notes for University of Michigan Summer Conference Course on Computer Aided Engineering of Vehicles and Machines, Ann Arbor, MI., July 1988.

Turner, P.R., 'Advanced Modeling in MCAE' Seminar notes for the Applicon User Group Conference, Ann Arbor, MI., May 1988.

Turner, P.R., 'Getting The Most Out Of ADAMS/View' Seminar notes for the MDI World User Conference, Ann Arbor, MI., May 1992.

PATENTS

Kramer, G.A., Barrow, H.G., Turner, P.R., Bodner, M.E., Cooper, J.G. 'Method and Apparatus for Design and Optimization for Simulation of Motion of Mechanical Linkages.' United States Patent No. 5,297,057. Date of Patent: March 22, 1994.

PRESENTATIONS AND INVITED LECTURES

de Leon, Y. P., Turner, P. R., Thompson, H. (2020, May 28). 'Remote learning: The pivot for higher education. CIO Exchange Podcast on Apple Podcasts.' [Audio File]. VMware CIO Exchange

Turner, P. R. [ellucian] (2019, August 19). 'Providing students with course access anywhere [Video]' Ellucain Live Conference Interview

Shuster, S., Turner, P., Gavin, T., et. al. (2018). 'Predictions Panel, secureCISO Detroit at the MGM Grand.' secureCISO Conference. Detroit, Michigan. August 9, 2018.

Turner, P. R., Phillips, S., Thorburn, P., Branjord, K. (2017). 'Executive Forum: Being Prepared for the Future [Customer Showcase Panel].' Ellucian eLive Conference. Orlando, Florida. March 19-22, 2017.

Turner, P. R., (2016). 'Data Center Concepts Seminar.' 2016 Schoolcraft Data Center Seminar. Livonia, Michigan. September 28, 2016.

Turner, P. R., (2015). 'Data Center @ Schoolcraft College.' 2015 SEMCOG (South Eastern Michigan Council of Governments) Tour. Livonia, Michigan. October 22, 2015.

Turner, P. R., 'Demonstration to Thomas "Mack" McLarty, counselor to President Clinton and former White House Chief of Staff, regarding presentation of the U.S. Dept. of Commerce E-Star Award to Mechanical Dynamics, Inc. for successful global competition.' Ann Arbor News, Ann Arbor, MI. July 29, 1997.

Turner, P.R., 'Integrating the Mechanism Optimal Synthesis Tool into the Mechanical Design Industry' Schlumberger Technologies, CAD/CAM Division', Ann Arbor, MI, August 4, 1989.

Turner, P.R., 'BravoMOST: Advanced Technology for Mechanism Design' Applicon User Group "Update" Newsletter, Florida, February, 1989.

Turner, P.R., 'Computers in Engineering' at General Motors. Motor Week® (Television's Original Automotive Magazine with host John H. Davis), Aired in 1984-85.

PROFESSIONAL TRAINING

Registered Professional Engineer, National Society of Professional Engineers,
Licensing Body: State of Michigan, Department of Consumer & Industry Services, Board of Professional Engineers.

License Type: Professional Engineer License – Permanent ID No.: 6201034960

Dates Maintained: 1989-2000. (License allowed to lapse due to non-use).

Licensure through certified EIT / PE examination allowing certify designs project outcomes.

Schoolcraft College/VMware, Chief Information Officer, Information Technology, 2015
Training on technology proposed and being implemented as part of a technology modernization project:

- VMware “NSX Exploration” (Software Defined Networking) Feb 5-6, 2015
- VMware “vSphere: Install, Configure, Manage” (Virtualization) Mar 23-26, 2015
- VMware “View” (Virtual Desktop Technology 101) Mar 29-31, 2015
- VMware “Horizon (with View)” (Virtual Desktop Tech 102) April 20-23, 2015
- VMware “Mirage” (Server and PC Update Management) Apr 27-29, 2015
- VMware “vSphere: Optimize & Scale” (Advanced Virtualization) May 18-22, 2015
- VMware “vRealize Operations Manager” (Monitoring & Health) Jun 8-12, 2015
- BlueCat “IP Administration and Management” Training May 5-8, 2015
- Cisco “Identity Services Engine” (Adv. User Login) Aug 18, 2015, Oct 1, 2015
- SolarWinds – (eleven modules for process monitoring and control) Nov 16-20, 2015

Schoolcraft College, Vice President and Chief Information Officer, Information, 2015

- Smart College Mandatory Training while at Schoolcraft College.

Engineering Society of Detroit, Advanced Education Certificate

- Professional Engineers Licensing Review Course Part II (P. E.) Mar 1989

University of Michigan, Finite Element Analysis Methods (ME 557) 1981

PROFESSIONAL AFFILIATIONS

MITE (Michigan IT Executive) Forum, 2015-2020
Gathering of Michigan Higher Education CIO to share activities, challenges, and solutions.

National Society of Professional Engineers, 1988-2002
State of Michigan - Licensed Professional Engineer.

Ellucian CIO Forum, Leading student information system provider, 2016-2020
Ellucian executives and international CIO's from higher education discuss emerging technology in student information systems.

Gartner® – Leading technology research and advisory company, 2017-2020
Member, research subscriber, expert advisory guidance, and annual symposium attendance.

Michigan Community College Association, legislative/public advocacy 2016-2020
Network-centric organization focused on community on legislative and public advocacy. I and Schoolcraft provided hosting services for MCCA's public facing IT infrastructure.

VMware CIO Forum, World leader in IT Virtualization 2016-2020
VMware executives and international industry and education CIO's discuss emerging technology in computer and systems virtualization.

PROFESSIONAL SERVICE

Schoolcraft College Board of Trustees – Administration Representative
Public Monthly Board Meetings – Schoolcraft College Cabinet Member, 2014-2020.

Ellucian® ETHOS™ Advisory Board. (Industry leader in Student Information Systems)
Customer Advisory Board Member (Guiding development of a new Higher Education universal data model for industry wide data sharing), 2018-2020.

Merit Networks – Member Conference – Organizing Conference Committee
Merit Member Conference & Merit Cyber Range Conference, 2018.

Secure World Conference – Organizing Conference Committee, 2018-2019.

Mechanical Dynamics, Inc. Board of Directors Member – Management Representative
Participated in corporate board mtgs. as executive management representative. 1993-1997.

COMMUNITY SERVICE

Faith Church and River Church
Deacon, Advisory Board Member, Technical Production Lead, Summer Camp Tech Team
Waterford, MI; Holly, MI; Rose City, MI, consistently since 2000 to Present

Reign the Band, Christian Rock Band, Manager, Sound Technician
Managed/collaborated on Record Contract, Gig logistics, Music Video filming and production, photo shoots, website creation, social media, finances, concert events, band member harmony. Two Music videos on YouTube.

Big Lake Association
Board Member, Treasurer, Davisburg, MI, 1986-1990

COMMERCIAL EXPERIENCE

ACCELERED LLC – VICE PRESIDENT OF INFORMATION TECHNOLOGY & SECURITY OPERATIONS

Bethesda, Maryland

November 2021 - Current

- Manage all facets of IT infrastructure & security operations for AccelerEd (a division of UMGC Ventures) whose main client is University Of Maryland Global Campus (UMGC) one of the largest online universities in the United States supporting over 90,000 students.
- Participate on Executive Staff reporting to the CEO assisting in Strategic Planning, Organizational and Operational Structure, and enterprise vision casting.
- Manage Security Operations including strategy and day-to-day application of a complete portfolio of security tools from virus protection to SIEM & advance threat detection tools.
- Manage Security Governance Risk and Compliance as well as development of a new framework agnostic governance program with a focus on CMMC & NIST SP800-171.
- Manage Server Engineering and Networking for UMGC 's Global Azure/AWS Cloud presence (85%+ of workloads) as well as two domestic Data Centers (Remaining ~15%).
- Manage Desktop Engineering and Support for the Global Enterprise.
- Manage Global Help Desk via Stefanini® for Tier 1 and local staff for Tier 2 & 3 support.
- Manage global remote office IT infrastructure and support for US, Europe, & Asia

DEDUCTIVE DATA - OWNER and PRICIPLE CONSULTANT (SINCE 2000)

Davisburg, Michigan -

September 2020 - Current

Client: University of Maryland Global Campus, via Higher Digital April 2021- Nov 2021

- Position: Acting CIO, AccelerEd (a division of UMUC Ventures) reporting to CEO.
- Security Framework consulting for implementation of CMMC (Cybersecurity Maturity Model Certification, a new DoD mandate) requirement.
- Global Telephony Strategy and migration from Cisco UCCE to Five9 Contact Center Software Systems – Rationalize 63 business user groups & user experience assurance.
- Restructuring global support system via ServiceNow™ - satisfy diverse user groups.
- Guidance and consolidation of FY22 IT budget proposals and roll up.
- Oversight and guidance of the IT support organization (AccelerEd) on CEO staff.

Client: Macomb Community College

September 2020 - Current

- Security Focused Consulting

- Successful PCI compliance remediation for 2nd largest Community College in Michigan involving process redesign, systems upgrade, PCI Self-Assessment Questionnaire use clarification, and remediation project definition.
- Stakeholder review, analysis, prioritization and project definition for IT system penetration testing findings remediation.
- Led point-of-sale system upgrade design, HW specification, quoting, logistics coordination, vendor management and future implementation project management.
- Led investigation on Privileged Access Management technology, manufactures, coordinating top (Gartner Magic Quadrant) manufacture demonstrations, principal author of full requirements specification and RFP documents including a requirements traceability matrix for future project implementation acceptance criteria.
- Led Cyber Security incident response investigation and remediation planning.
- Review 3rd party incident response remediation findings report, making recommendations and prioritization for a cyber security remediation project.

SCHOOLCRAFT COLLEGE - VICE PRESIDENT and CHIEF INFORMATION OFFICER

Livonia, Michigan

June 2014 - August 2020

- Full technical oversight of all Information Technology Systems and Staff.
- Provide technical vision/strategy to keep college information systems current, highly available, and meeting expectations of our primary client; students.
- In 2014, audited enterprise IT systems leading to \$10M of upgrade approvals and an overhaul of all IT systems; including compute, storage, network, carrier services, phone systems, and substantially expanded monitoring and cyber security systems.
- The overhaul also included a total enterprise virtualization of IT using VMware for server virtualization and initiated a conversion of 2500 PCs to Virtual Desktops.
- In 2020, replaced entire enterprise Wi-Fi system, more than tripling the number of APs, using latest 802.11ax protocol (Wi-Fi 6), adding four new buildings and Wi-Fi to parking lots aiding pandemic response.
- Pivoted to online course delivery over days, responding to the 2020 pandemic. Moving over 1100 traditional class sections to online.
- In 2019 planned a 5-year Schoolcraft IT infrastructure refresh including a move from blade server compute and SAN storage to hyper-converged vSAN with 100% GPU support for virtual desktops. Leading to improved performance, reliability, and robustness, as well as remote availability, support for demanding video performance, and further improved cyber security. Will be complete before YE 2020.

SCHOOLCRAFT COLLEGE - EXECUTIVE DIRECTOR OF DATA CENTER OPERATIONS

Livonia, Michigan

January 2014 - June 2014

- Led conceptualization and design of 150 rack commercial co-location data center.
- Design included a CHP (Continuous Heat & Power) generator to power data center.
- Generator to be fueled by waste natural gas exhaust from a college owned oil well.
- The design and preliminary budgeting was complete and was ready to let out to bid.

- The data center was not built due to financial constraints
- College Data Center virtualization consolidated 16 racks to 4 racks. The remaining 12 racks were converted to a mini tier 3 co-location data center now housing four customers and soon to be more.
- Designed, developed, and taught a Data Center Design course.
- Designed, developed, and taught a Data Center Operations course.

LIBERTY CENTER ONE, LLC. - CHIEF TECHNOLOGY OFFICER and CHIEF INFORMATION OFFICER

Pleasant Ridge, Michigan

January 2008 - January 2014

- Liberty Center One, LLC is a 20,000 sq. ft. high density and high availability Commercial Colocation Hosting Facility which had 100% uptime during my entire tenure, from April of 2008 to December 2014. The facility can be unofficially characterized as an Uptime Institute Tier Three facility with nearly 1000 clients.
- Involved in all major pre/post-sales activities and 100s of tours to prospective clients.
- Led the design, documentation, and implementation of controls/processes, and then was the principal Plante Moran Audit Team contact, leading a successful 2010 SAS70 Type II Audit. Uniquely, not requiring a Type I Audit and concluded the Type II audit with no exceptions!
- Technical leadership of all operations of physical and logical services provided.
- Evaluated technical requirements for all major prospective clients, recommended solutions and guided implementation for major facility deployments.
- Partnered with Telecom Carriers providing facility networking infrastructure, specify and implement client private pt2pt, MPLS, etc. circuits.
- Led implementation, support, and maintenance of all major infrastructure including:
 1. DTE primary power distribution through a private GE 2.5MW transformer
 2. Backup power system by two 750KW Kohler diesel generators and Kohler paralleling switch gear
 3. Uninterruptable Power Supply system by a 750KW MGE and a redundant 625KW Liebert UPS
 4. Monitoring of over 100 channels of data via a digital data acquisition system of all major mechanical systems. Designed to provide remote web-based viewing, email alerts, SMS pager alerts, and automated phone dialing alerts.
 5. Dual Russelectric 2000 Amp Automatic Transfer Switches.
 6. Networking Services provided by a Cisco infrastructure including four Cisco 6500 enterprise class routers. Monitored using an extensive implementation of Cacti, Zabbix, and Nagios SNMP style monitoring.
 7. Cooling systems including eleven 30 ton Liebert System III CRACs (Computer Room Air Conditioners) supported by a web-based temperature monitoring and alert system.
 8. Security Systems including Prox card readers and biometric door access system backed-up by a system of CCTV cameras connected to motion activated DVR system. 24/7/365 remote alarm monitoring.
 9. Fire Suppression provided by FM200 inert gas system (avoiding water-based systems possibly leading to IT equipment damage).

10. 24/7/365 Monitored fire alarm system.
- Occasionally led system selection, design, and implementation, particularly for monitoring.
 - Liberty Center hosts major applications for GM, Ford, Chrysler, and several other Fortune 500 Companies.
 - Provided high level technical leadership of Hard Drive Hotel, and Able Team.

WEB ELITE, LLC - CHIEF TECHNOLOGY OFFICER and CHIEF INFORMATION OFFICER

Pleasant Ridge, Michigan

April 2002 - December 2007

- Web Elite markets Web-enabled enterprise business systems and provided technical leadership for all Programs, Projects, and Product Development. Provided technical vision & high level tactical direction, for all business and technical processes.
- Provided leadership of all technical staff.
- SME Lead for implementing process improvements and attaining a CMMI Level 3 rating for Web Elite. (CMMI is Carnegie Mellon University's "Capability Maturity Model Integration" process improvement model) then required by General Motors and aligned with GM's SDP-21 process.
- Led the effort to gain a Ford Tier 1 vendor number for Web Elite.
- Provided design and technical guidance conceiving and winning a Point-Of-Sale Video Marketing System Program planned installed at North American Daimler Chrysler Dealership Service Centers.
- Served as principal force, turning around a non-profitable relationship with General Motors leading to follow-on business with GM and led to restructuring of Web Elite and General Motors organizations.
- Initial assignment was to design from process-flow-diagrams and implement 20+ Web-based business applications for ZevXchange, LLC; a multi-million-dollar electric car business; saving General Motors, Inc. tens of millions of dollars.
- Conceived a product and led development of a Web-Based-Training system and series of courses creating new business success with Ford's Corporate Quality Development Center.
- Provided leadership designing and implementing a digital video production studio supporting Web Elite's eLearning course content creation projects.
- Principal leading turn around of several trouble accounts including Carhartt Clothing, GM SPO (Supplier Parts Operations), and Accident Fund.
- Ensured differentiated solutions through intuitive & efficient business process analysis & mapping. Providing technical solution aligned with business client vision.
- Oversaw replacement of legacy information systems, using both off-the-shelf solutions, or completely custom systems for Web Elite Clients as needed.
- Oversaw all technical resource allocation, billability, hiring and termination.

AAWUA, LLC - INDEPENDENT MANAGEMENT CONSULTANT, MANAGER, and MANAGING DIRECTOR

Clarkston, Michigan

1998 - 2003

Opened a consulting practice, creating various entities and businesses. Providing:

- Software development consulting for Pulte Home Sciences and Torvec, Inc.
- Beta Testing and developed user documentation for SIMMs(tm), a high security encrypted internet chat and e-mail system.
- Financial systems research (i.e., Created sections of <http://www.new-shore.com>, a financial education site on investing due diligence).
- Mechanical systems simulation engineering expert witness consulting (Torvec, Inc.).
- Marketing and sales of legal services (Pre-Paid Legal, Inc., Director in 3 months).
- Personal investment portfolio management, real estate speculation, and marketing financial educational material.

MECHANICAL DYNAMICS, INC. - VP, PRODUCT DEVELOPMENT from 93 on, & prior DIRECTOR, INTERFACE PRODUCTS

Ann Arbor, Michigan

August 1989 - December 1997

- Helped promote Mechanical Dynamic Inc.'s (MDI) worldwide virtual prototyping software leadership. Helped guide MDI to a CAGR of 30-40%.
- Managed a multi-million-dollar budget.
- Led a company-wide team implementing a complete restructuring of 15 core software products (some FORTRAN written from 1977).
- Cultivated / maintained effective customer, distributor, and third-party relationships.
- Part of a management leadership team who positioned MDI for an IPO.

As Director I:

- Turned around a failing graphical post-processing package; ADAMS/Post and delivered on time and on budget.
- Introduced the use of graphical modeling for MDI's Mechanical System Simulation software via design and creation of ADAMS/View pre/post processing system.
- Led a team introducing Parametric Modeling, programmable user interface to main simulation product ADAMS (Advanced Dynamic Analysis of Mechanical Systems).
- Responsible for adding optimization methods and DOE (Design Of Experiments) methods into the modeling and simulation control environments.
- Assisted marketing with collateral development, demonstration systems, and technical presentations.

SCHLUMBERGER TECHNOLOGIES CAD/CAM - ENGINEERING MANAGER

Ann Arbor, Michigan

March 1986 - August 1989

- Provided technical leadership for a collection of MCAE software including: FE Modeling, FE Analysis, ADAMS Interface, Linkage Synthesis, FE Shape Optimization, Piping Schematic Design, and NC Machining CAD Geometry Tagging.
- Awarded a US patent, with others, for new Linkage Synthesis work.

- Managed development vision, plans, product specifications, documentation, release process, customer and field support, resource planning and scheduling.
- Provided marketing with business plans, collateral development, sales training and guidance, field training, technical presentations, etc.
- Developed and delivered many technical MCAE presentations across the US and Germany, Sweden, Switzerland, Italy, France, Japan, Korea, etc.

CHEVROLET - PONTIAC - CANADA GROUP - SENIOR PROJECT ENGINEER - 2.5L ENGINE DEVELOPMENT GROUP

Pontiac, Michigan

January 1985 - March 1986

- Implemented use of dynamic simulation for 1987 2.5L valve train development.
- Implemented Fourier cam design techniques.
- Managed FEM (Nastran) optimization of valve train components.
- Oversaw funding & coordination of UC Berkley valve train dynamic research.
- Managed dynamic experimental analysis of valve trains.
- Coordinated "Variable Valve Train" research at Ricardo Engineering, England.

PONTIAC MOTOR DIVISION OF GENERAL MOTORS - PROJECT ENGINEER

Pontiac, Michigan

June 1981 - January 1985

Engineering Analysis (sixteen months): Performed acoustic, vibration, and modal analysis of vehicle structures primarily to improve vehicle interior noise. Analytical and experimental analyses involved intensive use of instrumentation and computers.

Structural Analysis (eleven months): Classical and finite-element-method analysis of systems (i.e., body, engine, & suspension components) provided design direction.

GM Fellow at Massachusetts Institute of Technology (eighteen months): Acquired a MSME degree and performed vehicle dynamics research.

COMPUTER SKILLS

Desktop Software (Excellent to Expert): Microsoft Word, Excel, Power Point, Visio, IE, Edge, and others. Adobe: Acrobat Pro, Dream Weaver (**Moderate**), PhotoShop, Illustrator (**beginner**). Learning Management Systems: Blackboard: **Intermediate**, Canvas: **Intermediate**.

OTHER

Interests/Hobbies: Event and concert live sound engineering, mixing, post production, recording. Video Production including camera operator, live event multi-camera switching, internet live streaming, post production editing, director, producer (Examples: music videos – I Will Not Forget by Reign (https://www.youtube.com/watch?v=u1vt4_pRZYE) and Ten Thousand Angels by Reign (<https://www.youtube.com/watch?v=NmlSu37P9no>)). Wood working with variety of commercial tools and machinery. Metal working including welding, torch cutting, assembly and repair.

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