

CAREER SUMMARY

A successful, experienced senior executive with extensive commercial, government, and non-profit experience leading teams to achieve excellence in a variety of industries, including government, defense, manufacturing, transportation, aerospace, oil & gas, mining, and high-performance sport.

Currently designing and commercializing emerging “Internet-of-Things” (IoT) supply chain management technologies and renewable energy products.

EDUCATION

- M.B.A. in International Business, University of Saskatchewan, 1994
- B.Sc. Electrical Engineering, University of Saskatchewan, 1985

EMPLOYMENT HISTORY

2018 to Current: CodeSource LP. (<https://www.codesource.com/>)

Contractor

Dallas-based CodeSource is a market leader in part marking, product identification, authentication, asset management, Auto-ID and Internet of Things technology. I guided CodeSource through expanding their existing product line by founding a new asset tracking division for supply chain management and chain of custody applications, which is expected to increase CodeSource’s revenue ten-fold. After several small successful pilot projects, the product will launch in July 2021.

Specific contributions include:

- Created a business plan and defined the product line specifications to address specific target markets.
- Provided technical leadership to the product development team from conceptual design through implementation.
- Developed and oversaw the implementation of the product launch strategy.
- Contributed to marketing strategies and authoring marketing materials.
- Oversaw global product certifications: FCC (USA), IC (Canada), CE (Europe), and Aerospace (global).
- Identified and connected CodeSource to large international prospects for the new Internet of Things supply chain management technology.

2018 to Current: Gerson Lehrman Group, Inc. (<https://glginsights.com/>)

Council Member

Gerson Lehrman Group (GLG) connects Fortune 500 clients to the world’s largest and most varied source of first-hand expertise, including executives, scientists, academics, former public-sector leaders, and the foremost subject matter specialists.

As a GLG Council Member, I provide client’s executive teams expert advice on market intelligence, competitive landscape, product positioning, and pricing strategies in high tech

wireless, cloud software, and supply chain industries. Clients use this information to optimize R&D spending and develop product launch plans, revenue forecasts, and sales & marketing tactical plans.

2000 to 2020: IDENTEC SOLUTIONS, Inc. (<http://www.identecsolutions.com>)

Austria-based IDENTEC SOLUTIONS is the global market leader in wireless cargo tracking and worker safety solutions. I led the expansion of IDENTEC SOLUTIONS from a small, seven-person Kelowna-based startup company into a \$40M global Internet of Things market leader with 110 employees and offices on three continents. I transitioned from Chief Executive Officer to Chief Technology Officer in 2006 to support relocating the Americas head office from Kelowna, BC to Dallas, TX. Since 2006, I supported a global team of sales professionals as an executive-level technology expert and oversaw project implementation at international customer sites.

Over a 20-year career with IDENTEC SOLUTIONS, I fulfilled the following roles:

- Chief Technology Officer Americas / Global Senior Systems Engineer (2006-2020)
- Chief Executive Officer (2003-2006)
- Vice President Technology (2001-2002)
- Director Systems and Software Engineering (2000)

Specific responsibilities:

- As CEO, I was responsible for defining and implementing the company's mission, including overseeing revenue, budget, and staffing. I was accountable to the Board of Directors for all company outcomes, including financing the company through the cash-intensive startup phase and successfully navigating the company through the 2000-2002 tech bubble crash that delivered the worst market conditions in history for high tech startup companies.
- Coordinated the overall global research & development investments and developed product commercialization strategies.
- Successfully contributed to the global adoption of "internet of things" by leading the committees that developed industry-wide standards to safely incorporate this technology into supply chain and aerospace applications.
- Facilitated the development of several company centers of excellence, such as:
 - *Supply chain optimization*: marine terminal refrigeration container (perishables) management and port container logistics.
 - *Automated personnel badging*: safety & mustering, access control, workflow optimization.
 - *Smart factory systems*: optimize the movement of manufactured goods through production, storage, and distribution.

1989 to 2000: Calian Group Ltd. (<https://www.calian.ca/>)

Calian is a \$500M systems engineering company that designs and implements satellite communication equipment and military radio gear. Over a 12-year career with Calian's Advanced Technologies division, I worked in manufacturing, design engineering, sales, and finance. Roles at Calian include:

- Subcontracts Manager (1999-2000)

- Project Manager (1999-2000)
- Chief, Production Engineering (1997-1998)
- Industrial Engineering Manager (1990-1996)
- Manufacturing Engineer (1989-1990)

My highlights with Calian include:

- Managing a \$30M Canadian Department of National Defense (DND) manufacturing contract with a project team exceeding 80 people. I was accountable for all phases of the project budget, technical performance, scheduling, and risk management. On a margin basis, this was the most profitable project in the history of the company.
- Overseeing all the subcontracts for the European Space Agency (ESA) deep space dish in Perth, Australia that commanded the Cassini spacecraft in orbit around Saturn. This involved managing a budget of over \$1M and holding suppliers accountable for achieving challenging science deliverables.
- Supporting the command and control ground station network for SiriusXM satellite radio and Iridium satellite constellation by working with the manufacturing team to assemble, test, and commission dozens of satellite ground stations globally.
- Leading a team to create and implement a process redesign to improve intra-company cooperation and achieve ISO9001 quality system certification.

1986 to 1989: Joytec Ltd.

Saskatoon-based Joytec was founded in 1986 to design and manufacture a revolutionary realistic electronic golf simulator. We were the first commercial user of computer graphics overlaying NTSC video and the first deployers of CD-ROM technology in North America.

- Chief Engineer (1987-1989)
- Design Engineer (1986-1987)

As a design engineer, I was responsible for designing the hardware to measure a golf swing and display the calculated travel path. As Chief Engineer reporting to the CEO, I oversaw the \$1M R&D budget, schedule and product roadmap and coordinated the activities of a team of 10 hardware and software professionals.

PROFESSIONAL AFFILIATIONS

- Licensed Professional Engineer (P. Eng.) with Engineers and Geoscientists British Columbia (2000-current)
- Co-Chair, Society of Automotive Engineers (SAE) G18 Committee for RFID in Aerospace (2008-current)
- EPC Global Committee (International standards body for UPC bar codes and GEN 2 RFID) (2002-2010)
- President, Saskatoon Engineering Society (1997)
- Licensed Professional Engineer (P. Eng.) with Association of Professional Engineers of Saskatchewan (1986-1999)

CORPORATE GOVERNANCE

- **Cross Country BC (CCBC)** (2015-present): Board member for non-profit Nordic provincial sport organization (largest in Canada) with an annual budget exceeding \$1 million serving 51 local Nordic clubs, 30,000 members, 3000 BC youth, 20,000 school visits, and 300 elite Olympic-track athletes. CCBC has a strong governance model: bylaws, policies, strategic plans, financial statements, and budgets are board-approved, and the Executive Director's mandate is to manage the organization in accordance with board-approved policies and budgets.
 - Treasurer (2016-present)
- **Telemark Nordic Club** (2011-present): Board member for non-profit Nordic club with \$1/2 million revenue and 50,000 customer visits over the four-month winter operating season. The full-time General Manager manages the organization in accordance with board-approved policies and budgets.
 - Member at Large (2018-present)
 - President (2017-2018)
 - Vice President (2014-2017)
 - Director, Race Program (2011-14)
- **ZONE4 Ltd** (2014-present): ZONE4 is on track to become the global market leader in race scoring systems. I joined the board specifically to guide their business transition from a regional single-sport software company to a multi-sport global total solution provider. In 2020 I worked closely with the CEO to develop a successful COVID-19 survival strategy when their revenue dropped to zero in March 2020 as every race in North America was cancelled.
- **Paddock Wood Brewing Co** (2005-2008): Paddock Wood was Saskatchewan's first microbrewery. I joined their board to help guide the business from a local premium home brewing supplies retailer to a nationally distributed microbrewery.

PUBLICATIONS

Refereed Publications and Standards

Brooke, D. 1993. The Great Western Brewing Company Limited, R. Lepnurm & B. Allen (Eds.), In *Strategic Management Concepts & Cases* (7th ed., pp. 647–668). Irwin.

Pirani, C. 2006. Automatic Identification and Data Capture (AIDC) Pilot Project Phase III Final Summary Report.

I was the lead wireless engineer on the research team responsible for determining if active RFID tags in full-failure mode pose a threat to aircraft avionics/electrical systems in-flight. The results of this work directly lead to FAA voting to ratify the global industry standard SAE AS6023, which permits RFID technology to be deployed on aircraft.

SAE Aerospace Standard AS5678™: Passive RFID Tags Intended for Aircraft Use, Issued December 2006.

Prepared by SAE Committee G-18. As a G-18 committee member, I participated in document review and the committee ratification vote.

SAE Aerospace Standard AS6023™: Active and Battery Assisted Passive Tags Intended for Aircraft Use, Issued February 2017.

Prepared by SAE Committee G-18. As Co-Chair of the G-18 committee, I authored the initial draft of this standard, and oversaw final revisions, committee ratification vote, and SAE standards board approval.

SAE Aerospace Standard AS5678B™: Passive RFID Tags Intended for Aircraft Use, Issued February 2020.

Prepared by SAE Committee G-18. As Co-Chair of the G-18 committee, I oversaw final revisions, committee ratification vote, and SAE standards board approval.

Patents

- Canadian patent 1273705: Golf game and course simulating apparatus and method, September 4, 1990
- US patent 7345576: Method and apparatus for resolving RFID-based object traffic transactions to a single container in the presence of a plurality of containers, June 16, 2005
- US patent 6917291: Interrogation, monitoring and data exchange using RFID tags, July 12, 2005
- US patent 7053777: Interrogation, monitoring and data exchange using RFID tags, May 30, 2006
- US Patent Application 17/244,568: Proximity shield system and method, filed 29 Apr 2021

STUDENT SUPERVISION

- Dean Vitisin, 2010, N.A.I.T. 4th Year Engineering Capstone Project: RFID Tracking System to Track Pipe Spools and Loads Between Fab Shop and Module Yard
- Dr. Pingbo Tang, 2013: Automatic Mobile Device Geo-Referencing for Supporting Real-Time Inspections on Construction Sites, Ira A. Fulton Schools of Engineering, Arizona State University
- Ryan Brown, Ben Kernan, Graeme Kostiuk, Dr. Jahangir Hossain (faculty advisor), 2017, UBC 4th Year Engineering Capstone Project: Design, Prototype, and Field Test an Antenna Array that is Optimized for Race Timing Using EPC GEN2 Passive RFID Chips