# RICHARD LOURETTE

**Director of Embedded Systems | Technical Leadership | Strategic Innovation**

📧 rlourette@gmail.com | 📱 585.953.5309 | 📍 Fairport, New York | Remote Ready

## EXECUTIVE SUMMARY

Visionary embedded systems leader with 30+ years of experience and proven track record leading cross-functional engineering teams from concept to production. Expert at defining technical roadmaps, scaling embedded teams, and delivering mission-critical systems across IoT, aerospace, and consumer electronics. Known for hands-on technical leadership that balances strategic vision with deep technical expertise, driving continuous improvement in performance, scalability, and product stability.

**Leadership Impact:**

* Led 13+ engineers across firmware, hardware, QA, and RF engineering disciplines
* Won $50M+ aerospace contract through strategic technical presentation to executive stakeholders
* Transformed testing processes from weeks of manual AdHoc testing to days through automation and formalized test plans and tests
* Established Agile/Scrum methodologies for embedded development teams
* Successfully recruited and mentored engineering talent across multiple technical domains

## PROFESSIONAL EXPERIENCE

### **RL TECH SOLUTIONS LLC** | Rochester, NY

**President & CTO | Technical Leadership Consultant** (Oct 2022 - Present)

Providing strategic technical leadership and embedded systems expertise to high-growth technology companies while maintaining hands-on technical involvement.

**Strategic Achievements:**

* Delivered 150,000+ lines of production C++ code for next-generation embedded platforms
* Established embedded development best practices and CI/CD pipelines
* Led globally distributed teams across Australia, California, and Italy on complex system integration
* Mentored engineering teams on modern C++ and embedded Linux development

**D3 Engineering - Subcontractor to L3Harris** (2022 - 2023)

* **Business Development:** Won $50M+ contract through 7-hour technical presentation (275 charts)
* **Team Management:** Directed FPGA design and embedded firmware teams
* **Architecture Design:** Created distributed spacecraft payload systems integrating radiation-hardened MCUs

### **PANASONIC CORPORATION**

**Engineering Group Manager - Industrial IoT Division** (Jan 2020 - Oct 2022)

Led cross-functional teams developing connected IoT platforms, managing firmware engineers, RF engineer, QA team, electrical designer, and mechanical/manufacturing engineer while interfacing with global subcontractors.

**Leadership & Strategic Accomplishments:**

* **Team Leadership:** Managed diverse engineering team delivering industrial IoT gateway products
* **Process Transformation:** Authorized and implemented Agile/Scrum for embedded development
* **Tool Implementation:** Directed adoption of Jira and Zephyr for project management
* **Quality Improvement:** Led testing automation initiative reducing test cycles from weeks to days
* **Technical Roadmap:** Defined embedded systems strategy for next-generation IoT products
* **Resource Planning:** Created staffing plans and recruited engineering talent
* **Cross-functional Collaboration:** Coordinated with product management, sales, and marketing teams

**Technical Initiatives:**

* Architected scalable IoT gateway platform supporting BLE, Wi-Fi, and HaLow protocols
* Established wireless connectivity standards across product lines
* Drove continuous improvement in power efficiency and system performance

### **TOKENIZE INC. / CASE WALLET** | New York, NY

**VP Engineering - Wearable Technology** (Apr 2014 - Jan 2020)

Led engineering teams developing ultra-low-power embedded systems for biometric wearable devices, presenting to board members and venture capitalists for funding rounds.

**Executive Leadership:**

* **Stakeholder Management:** Presented technical strategy to board members and VCs
* **Team Development:** Built and led firmware engineering teams
* **Strategic Planning:** Advised executive team through next-round funding
* **Technical Direction:** Guided development of power-efficient embedded systems
* **Quality Standards:** Led PCI-compliant certification using FIME certification process

### **L3HARRIS CORPORATION** | Rochester, NY

**Principal Investigator / Chief Scientist** (May 2002 - Apr 2015)

Led research initiatives and technology development teams while maintaining hands-on technical involvement in spacecraft payload processor development.

**Strategic Leadership:**

* **Technical Roadmap:** Led technical roadmap development for Aerospace IRAD projects
* **Innovation Leadership:** Led development of distributed satellite processing architecture
* **Research Direction:** Directed advanced technology development initiatives
* **Mentorship:** Developed junior engineers’ technical and professional skills

### **EASTMAN KODAK COMPANY** | Rochester, NY

**Chief Firmware Architect** (Aug 1994 - May 2002)

Led international firmware development teams creating embedded systems for consumer electronics and imaging devices.

**Global Team Leadership:**

* **International Collaboration:** Managed firmware teams across multiple countries
* **Cross-company Partnerships:** Interfaced with Gretag, Noritsu, and Kodak Research Labs
* **Framework Development:** Created object-oriented software framework for digital cameras
* **Product Strategy:** Supported multiple product lines from single architecture

## LEADERSHIP PHILOSOPHY

“I believe technical leaders must be able to work through problems at any level to effectively guide their teams and make data-driven decisions. I challenge my staff but won’t let them fail - when team members encounter complex challenges, I guide them with questions that help them discover solutions while building their technical confidence.”

This hands-on approach has consistently helped me build high-performing teams that value both technical excellence and collaborative problem-solving.

## TECHNICAL EXPERTISE

### Programming & Development

* **Languages:** C/C++ (30+ years), Python, Assembly
* **Methodologies:** Agile/Scrum, CI/CD, Test-Driven Development
* **Tools:** Git, Jira, Zephyr, CMake, Yocto

### Embedded Systems & Platforms

* **Operating Systems:** Embedded RT Linux, FreeRTOS, RTEMs, Nucleus RTOS
* **Processors:** ARM Cortex-M/A, TI MSP430, STM32
* **Protocols:** BLE, Wi-Fi, Ethernet, NFC, MQTT, CoAP

### Leadership & Management

* **Team Building:** Recruiting, mentoring, performance management
* **Strategic Planning:** Technical roadmaps, resource allocation
* **Process Improvement:** Agile transformation, automation initiatives
* **Stakeholder Management:** Executive presentations, board reporting

## KEY ACHIEVEMENTS

### Strategic Business Impact

* Won $50M+ aerospace contract through technical leadership and strategic presentation
* Advised startup through successful funding rounds as VP Engineering
* Created technical roadmaps aligning embedded systems strategy with business goals

### Team Development & Process

* Built and scaled engineering teams across multiple disciplines
* Transformed manual testing to automated frameworks (weeks to days)
* Implemented Agile/Scrum methodologies for embedded development
* Established development standards reducing time-to-market by 60%

### Global Collaboration

* Collaborated with distributed teams across multiple continents in recent consulting engagements:
  + Coordinated with Australia-based Real-Time Linux board support team
  + Interfaced with hardware teams in Livermore, California
  + Collaborated with IMU specialists in Italy
* Managed international firmware teams at Kodak
* Coordinated with global contract manufacturers and suppliers

### Technical Innovation

* Architected distributed satellite payload processing systems (NASA CFS)
* Created heterogeneous CPU/FPGA architectures for aerospace platforms
* Developed object-oriented framework supporting entire product line

## PROFESSIONAL DEVELOPMENT

### Patents & Publications

* 20+ US Patents in embedded systems and signal processing
* Published technical articles on modern C++ for embedded systems
* “Eliminating Dynamic Memory in Embedded Protocols with C++26 Static Reflection”
* “Functional Safety Standards Hierarchy for ProfiSafe Implementation”

### Industry Engagement

* Technical thought leader with active GitHub repository of articles
* Contributor to embedded systems community best practices
* Speaker on modern embedded development techniques

## EDUCATION

**Bachelor of Science in Electrical Engineering**  
University of Dayton | Dayton, Ohio

## SECURITY CLEARANCE

Previously held DoD Top Secret clearance with SSBI for SCI access (available for reinstatement)