

Kurt A. Gunther, P.E.

Metrom Rail, LLC, Lakemoor, IL

2011-present

Metrom Rail - a company that supplies railway safety improvement products

Director, Engineering (2014-)

Engineering Manager (2011-2014)

- Supervise staff of engineers, technicians, and field service personnel.
- Technical management of development and deployment of various rail products:
 - UWB-based Train Location and Separation Control System
 - AURA® Railway Maintenance Machinery Collision Avoidance
 - Passenger Rail Control (signal and speed limit enforcement / collision avoidance)
 - Train Crossing Warning Enhancement (rail crossing gate overlay)
 - SenTrack Track Monitor (derailment detection, track integrity sensing)
 - Structure Monitor (structure displacement / movement sensing)
- Coordinate technical requirements development and product realization of train control systems in compliance with IEEE 1474, 1483, EN 50126, and EN 50128.
- Development of remote monitoring and location sensing systems for wayside and for railcar and maintenance machinery.
- Participate in and provide oversight of installation of sensing systems and braking, safety systems, and power interfaces on existing and new rapid transit railcars.
- Provided oversight and technical review development and installation wayside track integrity, train derailment detection, and grade crossing sensing systems in both standalone enclosures and in new or existing wayside bungalows.
- Guide development of RF radio and data communication systems in the VHF, UHF, and microwave bands.
- Lead product design and verification testing for compliance with AREMA, AAR, EN, FCC, IEEE, ISO, MIL-STD, NFPA, UL, and other industry standards and regulations.

BIT 7, Inc., Mundelein, IL

1992-2011

BIT 7 - a multi-discipline product development company

Director of Engineering (2006-2011), Engineering Manager (2002-2006), Chief Electronic Engineer (1997-2002), Senior Electronic Engineer (1995-1997), Project Engineer (1992-1995)

- Designed or supervised technical development of various sensing and measurement systems, including electrochemical gas cells, piezoelectric pressure sensors, hall-effect devices, infra-red and UV emitters and detectors and MEMS microphones.
- Led multi-discipline design teams from concept and specification through top-level and detailed design, functional and agency testing.
- Lead Electrical Engineer and Project Manager for Airport "People-Mover" Control and Sensing Systems (originally deployed by Matra):
 - Reverse-engineered several short range (69 kHz-120 kHz) wireless communication transceivers which mount under the vehicle.
 - Created and manufactured a sensor which detected low tire pressure and communicated pressure faults via near-field RF to system controller.
 - Designed and manufactured an HVAC control system for passenger compartment climate control.

Kurt A. Gunther, P.E.

- Lead Electrical Engineer and Project Manager for Class II Medical Device Respiratory Medication System. Led development from specification through FDA approval.
- System Engineer for Project IceCube (University of Wisconsin - Madison for National Science Foundation). Neutrino Observatory at the South Pole. Also designed and supervised manufacturing of a high-reliability DC power converter for installation on the ice surface at the South Pole, capable of operation down to -55°C.

Sun Electric Corporation, Crystal Lake, IL 1986-1992

Sun Electric - a manufacturer of automotive diagnostic equipment for professional use

Design Engineer / Project Manager, Engineering Development Group

- Coordinated team for design of a PC-based vehicle emissions analyzer and led certification with California Bureau of Automotive Repair.
- Designed a wide range of analog sensing and measurement circuits, including voltage, current (resistive shunt and hall-effect), engine RPM, temperature and engine vacuum as well as embedded microcontroller and digital processing electronics.

Zenith Electronics, Inc., Glenview, IL

1984-1986

Zenith Electronics - a manufacturer of televisions and switching power supplies

Engineer, Switching Power Supply Development Group (1985-1986)

Education / Credentials / Accomplishments

- **BSEE**, Illinois Institute of Technology, 1984, with honors.
- **Licensed Professional Engineer** (Illinois license # 062-051684).
- Named inventor on **11 United States Patents**