



## Rafal Kiszko

Multi-skilled, business-oriented technology expert

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## Personal Profile

Highly adaptable technology professional with a broad spectrum of expertise ranging from project management and business development to advanced mechanical design and electronics. Experienced in international environments, having lived in five countries, with a deep understanding of product design, engineering, manufacturing, and automation.

## Skills & Attributes

### Mechanical Engineering & Carbon Concrete Technology

#### *Core Engineering & Design*

- Carbon Fibre Reinforced Concrete Automation & Stretching Frame Design.
- Product design, development, and manufacturing optimization.
- Advanced 3D CAD/CAM design (Autodesk Inventor, Fusion360, Solidworks).
- Materials expertise: Carbon Composites, Alloys, Polymers, Wood, Steels.
- Applied physics: Force, pressure, torque, and strength engineering calculations.

### Industrial Automation, Robotics & Prototyping

#### *Execution & Manufacturing*

- Robotics and Industrial Automation engineering.
- CNC machine construction, control, and 4-axis CAM programming.
- TIG Welding, steel machining, and plasma/laser cutting.
- Laser and 3D printing technologies (including self-built machines).

### Electronics & Embedded Systems

#### *Hardware & Micro-controllers*

- Electronics design and micro-controller programming (C++, Atmel Atmega, STM32, ESP32).
- Embedded systems development (Raspberry PI, IoT).
- Printed Circuit Board design.
- Hardware installation, testing, soldering, and troubleshooting.

### IT, Network Security & Telecommunications

#### *Systems & Infrastructure*

- Advanced Linux & Network Security: Ethical software/hardware Hacker since 1996.
- Extensive knowledge of computer and telecommunication systems: NAS, RAID, Routers, Switches, Firewalls, VPN, VoIP, GSM, IoT.

### Business Leadership & Project Management

#### *Operations & Management*

- Business & Project management (including international outsourcing).
- International business operations (lived and worked in 5 countries).
- Multilingual communication: Excellent English (IELTS Academic Cert.), fluent Polish, basic German and Greek.
- Logistics & Operations: Driving license (B, C - trucks over 7.5 tons) and VLOS Drone pilot license.

## Education

### Higher Vocational School

*Diploma (Level 4 + A Levels equivalent) | 1999*

- Specialty: Social Law – Fast track option.

### Vocational School

*Diploma (Level 3 equivalent) | 1998*

- Specialty: Assembling of Electronic Components.
- Specialist training in Electronics, Electrotechnics, and Mechanical Construction basics.

## Professional Experience

### 2024 — 2025: Mechanical design/Robotics/Automation/Carbon Fibre Concrete

SKM GmbH (bankrupt) Germany

- Carbon Fibre Reinforced Concrete - Machine and stretching frames design.
- Member of the WallBot team - Design of robot components (in cooperation with Dresden University of Technology).
- Machine Design incl. Pneumatics, Hydraulics, CNC, Technical drawings, Laser cutting files, Sheet metal bends.
- Stress analysis and engineering calculations.
- CNC CAM toolpath and g-code programming. (Lathe / Mill)

### 2019 — Present: Founder & Owner

Ideonium sp z o.o. – Poland

- Own business development - various projects:
  - Aluminum recycling - small scale melting furnace
  - Home concert audio - Modular fully customizable Amplifier and Speakers
  - Hemp extracts - Cannabinoid equipment
  - Decorative products - Various decorative and smart IoT decorations
  - Machining Polymer Wax - A unique self engineered formula
  - AI assisted Home Automation - Fully local&private, Node-Red, MQTT, Custom sensors firmware, Home Assistant
- 2019 B2B - Contract with CTS GmbH - Technical support in one of major petrochemical refineries in Germany.
- 2020 B2B - Contract with CTS GmbH - Automation support in major pharmaceutical factory in Vienna/Austria.

### 2018 — 2019: Electronics/Mechanical construction/Factory Automation

CTS GmbH – Germany

- Development of robotic appliance handling radioactive acids for nuclear medicine client.
- Various autonomous driving robot components design.
- Electronic board design (PCB).
- Automation solutions development.
- Solidworks 3D CAD technical solutions design.

### 2016 — 2018: Technician

ProgenoX / Zippermast GmbH – Germany (references available from CEO Frank Woodcock)

- Microcontroller based electronics design (RS232, LCD, gyroscope, temperature, GSM etc.).
- Responsible for the wireless communication link in the centauro-project.eu robot.
- Represented the company at multiple consortium meetings in Italy, Germany and Sweden.

## **2008 — Present: Self studying technology & engineering**

### **Independent Workshop**

- Electronics design with microcontroller programming in C++ (Atmel Atmega, STM32).
- Computer Numerical Control (CNC) machine design with automation from scratch.
- TIG welding, plasma cutting, lathe & mill steel machining, woodworking.
- Product development.

## **2004 — 2008: Project Engineer / Managing Director**

### **Redinx Ltd. (Pharos dependent) – United Kingdom**

- Managed the company from start-up, handling an average of 100% turnover increase per year.
- Installed and configured equipment in top security access zones (collocations).
- Rapidly developed, manufactured and delivered 100+ exclusive Linux video processing appliances for many worldwide known TV channels (BBC, MTV, Discovery etc..)

## **2004 — 2005: Engineer**

### **Pharos Communications – United Kingdom (now Evertz-Canada)**

- Quickly promoted, and assigned the formation & management of a subsidiary company: Redinx Ltd.
- Developed a unique printer port based redundancy server switch mechanism.
- Build an extensive firewall with advanced traffic load balancing for the whole business.

## **2003: Computer Technic Contract / Project**

### **Aermatis AG (Global Communication Services GmbH) – Germany (References available upon request in .pdf format)**

- Developed and maintained company telecom platform - setup for new telecom product, including GSM/SS7 switches, WinNT servers, SQL databases, network security, setup and administration.
- Performed a variety of critical system rescue tasks at main collocations in London and Frankfurt.

## **2003 — 2004: Self employed**

### **X Tel - Telecom services – Poland**

- Formed and managed an International Switchless Telecom Carrier business (Virtual Operator).
- Created the most competitive calling card based product on the Polish market.
- Extended company product range with wholesale voice termination, callback, 00800 ITFS numbers, VoIP, and call-center solutions.

## **2001 — 2002: Computer Technician**

### **Starline Telecom GmbH – Germany**

- In charge of 3Com U.S. Robotics Logistic Center operation - Europe division.
- Responsible of the Local Area Network administration and company computer service.
- Contributed to the redevelopment of a prepaid-card based Internet access product for ISP.
- Diagnosed several hard to find network problems greatly improving performance.

## **2000: Soldier Communications troops**

### **Polish Ministry of Defense (References available upon request in pdf format)**

- Military conscription with specialty NATO truck driver training (over 7.5t).
- Fire safety supervisor duties.

## **1995 — 1998: Apprenticeship**

### **KGHM "Rudna" Copper Mine – Poland**

- Apprenticeship in the Telecommunication and Computer section at the surface.
- Performed the installation and service of telecommunication cables, electronic circuits design, soldering, Printed Circuit Board fabrication, assembly and installation of electronic components.