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**Robert W. Pence**

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## SUMMARY

PLC and HMI expert with ten years' experience in semiconductor, industrial gas, and product security industries who can also direct electrical and mechanical design; create technical, test, user, and quality system documentation; coordinate with customers and internal users; and provide worldwide support for legacy installations and start-ups.

## PROFESSIONAL EXPERIENCE

May '05- **SICPA PRODUCT SECURITY, Springfield, VA – Controls Engineer**

present Coordinated equipment development and installation.

- Create algorithms for real-time fault detection to minimize bad product in line with \$5MM annual contract that recoups \$90MM per year for client.
- Set up high-speed vision, controls, and printing system to produce 1.2 billion units per year. Create b.o.m. and produce acceptance test documentation.
- Facilitate inception to operation implementation by replicating field functionality and testing components, saving 2 man-weeks on start-up.
- Support production remotely and implement SMTP and SMS-based alerts, reducing downtime to measurable minutes.

Jan '01- **MATHESON TRI-GAS, Montgomeryville, PA – Controls Engineer**

May '05 Selected, developed, and tested power, pneumatic, enclosure, PLC, HMI, and IC components.

- Reduced engineering effort required for routine order processing by over 80%, increasing bandwidth for subsequent large orders.
- Created pneumatic assembly that replaced over 20 centrally procured and stocked parts, saving 40 hours per week in manufacturing and reducing the number of field service visits.
- Developed I/O analysis screens that eased troubleshooting and pre-ship checks.

Jul '97- **MATTSON TECHNOLOGY (CFM), Exton, PA – Senior Software Engineering Aide**

Jan '01 Network and computer administration for a large software and controls group, developing ISO 9000 procedures and work instructions, and international installations.

- Supported development and installation of industry-first 300mm wafer-cleaning system, accelerating contract acceptance by troubleshooting the SCADA interface to legacy code.
- Aided in testing and installing third-party robotics equipment in \$24MM project in Asia, integrating it via SECS/GEM network standard. Received "Pit Bull" award for contribution.
- Created quality control procedures for high-failure components, resulting in fewer field failures and lower inventory costs.

## SKILLS

- Ladder logic and other IEC 61131-3 languages and HMI programming, including a range of network communication standards.
- C/C++, VB, Java, Pascal, Wonderware, micro-controller BASIC and other varieties, HTML, and scripting languages; AB, Siemens, and OMRON PLCs; and other embedded, handheld, desktop, and server platforms.

## EDUCATION

- Pursuing Computer Engineering degree at George Mason University, GPA 3.9.