PLC Maintenance Training

Customized Solutions

- I. Introduction
  - A. Typical Applications
  - B. Efficiency
  - C. Connects
  - D. Guidelines
  - E. Circuitry
- II. PLC Hardware
  - A. Inputs and Outputs
  - B. Relays
  - C. Mating to wiring diagrams
  - D. Internal pass-thru
- III. Logic Sensors
  - A. Switches
  - B. TTL Logic
  - C. Sinking Sourcing
  - D. Solid State Relays
- IV. Soft Hardware
  - A. Sensor Wiring
  - B. Presence detection
  - C. Device options
- V. Logic methods
  - A. Boolean techniques
  - B. Gate forms
  - C. Sample applications
- VI. Mapping and routing
  - A. PLC status
  - B. Memory
  - C. Logic Scans
- VII. Hard software
  - A. Latches
  - B. Counters
  - C. Timers
  - D. Design practices
- VIII. Practical Problem Solving

The emphasis of this class is toward Programmable Logic Controller maintenance and troubleshooting. It is not intended for the purpose of teaching the skills to design, alter, or modify a control system that has already been installed to function for a specifically intended task or purpose.

Rather, an effective troubleshooter must be able to:

1. Understand what an apparatus has been designed to achieve.
2. Know what the system is comprised of in order to achieve that result.
3. Know the role and purpose of each component.
3. Know how to correctly operate the failed apparatus in order to test its proper function.
4. Know how to pinpoint and isolate the CAUSE of any component failure.
5. Know how to identify and source any failed component(s) in order to obtain a proper replacement.

These skills are the goals of this lesson plan.
The class will be putting these skills into practice as each faction is discussed.