**The Next Generation of Industrial Automation: Programmable Automation Controllers**

Thesis: Programmable automation controllers (PACs) are more preferable among other industrial automation systems by providing enhanced technical properties, ease of use and financial benefits.

1. Improved technical attributes
   1. Operational features
      1. High degree of control system (12)
      2. Offering various signal operations (8)
      3. Simultaneous data management (6)
   2. Hardware capabilities
      1. Hardware integration (10)
      2. Ability to perform complex calculations (9)
      3. Greater input-output and memory capacity (7)
   3. Safety
      1. Robustness (12)
      2. Well established application (14)
      3. Adaptability (1)
2. User friendliness
   1. Ease of programming and development
      1. Easy and powerful programming (6)
      2. Easy deployment techniques (1)
      3. Fast development process (1)
   2. Flexibility
      1. Multi-discipline development environment (4)
      2. Multi-domain functionality (6)
      3. Simple and modular architecture (8)
   3. Communication and interface
      1. Data integration (8)
      2. Support for standard communication protocols (7)
      3. Large scale network and monitoring (7)
3. Economic advantages
   1. Profitability
      1. Efficiency in terms of cost
      2. Low power consumption
      3. Reduced cost by built-in capabilities (6)
   2. Large scale of usage area
      1. Small applications (4)
      2. Industrial applications
   3. Support
      1. Serviceability (12)
      2. Inexpensive maintenance (8)
      3. Backward compatibility (10, Rockwell!)