

Virtually Clustered Automation Platform



Abstract: It is a new architecture for automation & control systems to safe guard the end-user from obsolescence and allowing multi-vendor flexibility of sub-components and controllers as current systems are inherently constrained.

The Invention

A virtual automation platform is designed using a communication protocol to change how controllers and sensors are designed to communicate and function. It seeks to change the design paradigm of the current automation & control systems.

Market Need

Industrial plants are generally expected to last around at least 30-40 years.

- There is a strict vertical division in the market with equipment/solution providers supplying non –interoperable and expensive systems.
- The end-users are locked-in with one vendor during the complete life-cycle of the system.
- With current efforts by the Major-end users & Open Process Automation Forum for an interoperable platform, this industry has a potential to be disrupted.

Applications

- Distributed Process Automation & Control Industry
- Semiconductor Devices Manufacturing
- Pharmaceutical Industries
- Petrochemical Plants
- Oil & Gas Distribution Plants

Competitive Advantage

This technology is one of the first to be developed and patented according to the vision of Open Process Automation Forum.

Project Status

- A lab prototype was tested by designing a control system to control a desiccator.
- Extensive tests were conducted to measure through put and reliability

Looking for a Development Partner

- A proof-of-concept needs to be built demonstrating the flexibility of the architecture
- Later, a pilot test needs to be conducted in collaboration with and industrial end-user.

Patent Protection

6 Patent applications covering this technology has been filed in the US, GCC and PCT

About KFUPM

King Fahd University of Petroleum & Minerals is a leading educational organization for science and technology. KFUPM Innovation & Industrial Relations is the IP management and technology licensing office tasked with taking innovation from lab to market place.

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