

EUR21_13 - ELECTRICAL CONTROL SYSTEMS – PROCESS CONTROL INTERFACE DESIGN

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Abstract - Adoption of integrated Electrical Supervisory Control and Data Acquisition systems for the control and monitoring of electrical distribution equipment has presented challenges across a global portfolio of projects and operating assets.

The former transition from discrete hardwired to serial interfaces mainly suffered due to interface latency due to the hardware and software limitations. The subsequent natural progression to serial interfaces over Internet Protocol network communications has to some degree mitigated the early latency issues. However, this paper outlines the investigations findings as a result of a global portfolio of major projects and operating assets suffering process control interface issues, where the majority impacted the project start-up schedule. The investigation team established several lines of enquiry encompassing the system interface designs, technology limitations, contractual framework with equipment suppliers and personnel competence.

The work concluded in the development of an Upstream Segment specification and associated proof of concept testing of less utilised protocols for process control interfaces.