ABSTRACT for the 2017 ISA WWAC Symposium

Comparison of IoT Connectivity Protocols

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ABSTRACT

Many IoT platforms support a large number of connectivity protocols. Identifying the ideal protocol to use depends on the system requirements and cellular budget. When connecting field devices with cellular data plans, it is important to understand the overhead added by each protocol and how that overhead will impact the cost of the cellular data plan. If solutions require in the field configuration or system settings, change over time a protocol that supports a flexible object-oriented interface may be preferred. During this presentation, HMS will present data comparing 8 of the most common IoT protocols. Several different water waste water use cases will be defined, and the relative performance of each protocol will be discussed.

Comparisons will cover alarm only, low, medium, and high data rate use models. Protocols will be evaluated for overhead, latency, flexibility and ease of use. HMS data on AMQP, MQTT, OPC-UA, HTTP, JSON, SOAP, and REST protocols will be shared based on connectivity testing using HMS edge gateways with multiple cloud vendors.

Attendees will be able to leverage this information to make a more educated decision when picking a protocol for their next IoT project or when evaluating IoT solution providers.

ABOUT THE AUTHORS

Tom McKinney *is HMS Industrial Networks Americas Business Development Manager. Tom holds a degree in Electrical Engineering and a Masters in Computer Science. Tom held multiple roles as an FPGA/ASIC design engineer before managing ASIC development efforts including SoC solutions for satellite TV and VoIP systems. Tom has an extensive background in communications system design and secure networking systems. Contact: tmc@hms.se*