Intelligent Device Management

IEC SC65E WG2

Product properties & classification

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Purpose
• Define standard templates of best practices and work processes for implementation and use of diagnostic and other information provided by intelligent field devices in the process industries.

Scope
• Committee work products will include recommended work processes and implementation practices for systems that utilize information from intelligent field devices and the people who use them.
• Work process templates by worker roles (such as maintenance or operations) will be one area of research. Best practices for implementation will be developed.
• Models will be developed for the flow of information from devices through the various systems that use the information.
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• Develop document(s) that provide a method for standardizing the descriptions of process control devices (measuring equipment) and specifies how to use the device descriptions for electronic data exchange between two computer systems, e.g. one of a customer and one of a supplier, applying properties and lists of properties

• Generation of Operating Lists of Properties (OLOP) and Device Lists of Properties (DLOP) for automated industrial valves (including control valves and process regulators) and their components as well as the characterization for this device family

• The generated structures should, for instance, enable users to compare the information about similar measuring instruments or their components (benchmarking), plant documentation and data exchange between manufacturers and users
ISA-108 IDM Program Overview

Other enterprise programs

IDM Program
- Enterprise management mandate and commitment
  - KPI's
  - Objectives and resources

Program Management and Design
- Program performance feedback to management
- Program design and performance improvement
- IDM history and needed changes
- Technology and resources

Program technology and market relationship management
- Program support and monitoring for facilities

Enterprise level program operation

Facilities
- Facility level program activities
  - Support for IDM implementation to new facility/devices
  - Support for IDM for operation and maintenance
  - Support for IDM implementation to existing facility

Device Market
- See Figure 12

Scope development
- Design and engineering
- Construction and commissioning
- Operation & maintenance
- Turnaround
- Decommissioning
- Notifications for IDM should be directed (by configuration) from the appropriate source to the appropriate destination with appropriate priority.

- This configuration is application dependent – not out of the box.

- Both Host system and Device configuration is necessary to accomplish the routing.
Future / Planned Work

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• Part 2 (Normative) text in development
• Future Plans
  – Part 3 – implementation guidelines
    – Non-normative guidelines for achieving Part 2 requirements
  – Part 4 – Industry applications
    – Examples for applying IDM principles by industry (refining, pulp & paper, factory, etc.) or application (valve, flow, etc.)

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• Circulating New Work Proposals (NP)
  – Networking equipment
Questions – from audience

• What is being done and mechanisms exist to ensure alignment between work at IEC and other organizations such as ISA?
  – Answer: IEC has a Group D Liaison relationship that allows for participation of other SDO’s as an ‘extension’ of the IEC team so that work proceeds in parallel in both organizations.

• How does someone become involved in working on international standards?
  – ISA Answer: Because ISA is an ANSI accredited SDO, one of the requirements is that participation be open to any technically qualified individual.
  – IEC Answer: Slightly different in each country because membership is by country and therefore you need to be nominated as an expert by your country. This also requires that you first be a member of your National Committee, which for some countries including the USA has an associated annual fee.
Questions – to audience

1. How many of you are using the diagnostic capabilities of their intelligent devices by collecting the information by some ‘automated’ method? (i.e. not using a handheld device for communications only. It counts if they have the handheld device brought back to a ‘docking station’ to integrate into a larger data repository.) – 25%
   a) For those who are doing something what are the challenges you face?
   b) For those not doing anything what are the roadblocks preventing you from doing so?

2. How many participants are using remote maintenance support services?

3. Cloud based systems will be a part of any IIOT solution. How many attendees are using cloud based platforms with their control systems?