Development of a smart alarm management system for intralogistics plant (BA/SA/MA)

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Task Description:

To assure the desired behavior of a production plant an alarming system that informs the operator about problems or faults is indispensable. However, many industrial plants have badly designed alarming systems that lead to so-called alarm floods. Too many alarms in a short period of time lead to a mental overload of the worker. In many cases the alarms are redundant or correlated and could be condensed to one alarm message.

In this thesis existing implementations of alarm management systems (AMS) shall be evaluated to detect their drawbacks. Further possible fault scenarios for an intralogistics demonstrator plant shall be considered to develop a smart AMS that overcomes the previously detected drawbacks. The developed approach shall be implemented in TIA (Siemens).

Preliminaries:

- Interest in recent developments of automation
- Experience in PLC programming beneficial (especially Siemens TIA)
- Good understanding of automated production systems
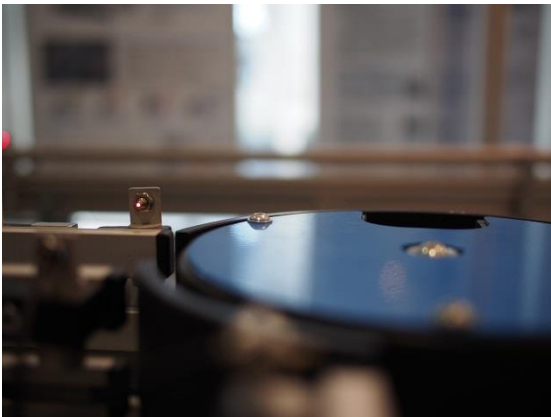
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[1] https://www.imes-solutions.com/de/root/mes-software/plant-historian-am.html