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MIALinx

A SIMPLE AND FLEXIBLE WAY TO INTERCONNECT MANUFACTURING

MIALinx enables the creation of individual rules for interconnecting information in manufacturing. The MIALinx system executes the rules, monitors sensor events and automatically initiates predefined actions.

Interconnecting manufacturing in a simple and flexible way

Besides the requirement of holding delivery schedules, today's manufacturing companies increasingly need to take customer demands into consideration. Paired with economic requirements, such as stock reduction and shorter throughput times, a complex problem for the production process is created: Demands change constantly with the pressure to optimize rising steadily at the same time. Routine tasks need to be automated and digitization possibilities fully exploited. However, when it comes to putting things into practice, there's a complication: Today's IT systems are inflexible. Adaptions, extensions and interfaces are both costly and time-consuming. The gap between manufacturing requirements on the one hand and IT implementation on the other is widening. With its innovative concept of rule-based manufacturing, this is where MIALinx comes into play.

The missing link for Industrie 4.0

With MIALinx, the user can create rules following the paradigm "if a sensor recognizes a defined event, then a predefined action is triggered". Sensors may be physical, such as electric current sensors to detect equipment malfunctions or virtual, to monitor stocks in ERP systems. On the execution side, a wide range of actuators can be addressed: anything can be linked simply and at low cost, from email or text messaging, right up to robots.

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02.2018/02.2018

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The potential fields of application are extensive: Manufacturing control, intralogistics, maintenance and logistics disposition are just a few examples. MIALinx can also be implemented to advantage in indirect areas as a tool to model interface processes, such as automatically informing the sales department about completed customer orders.

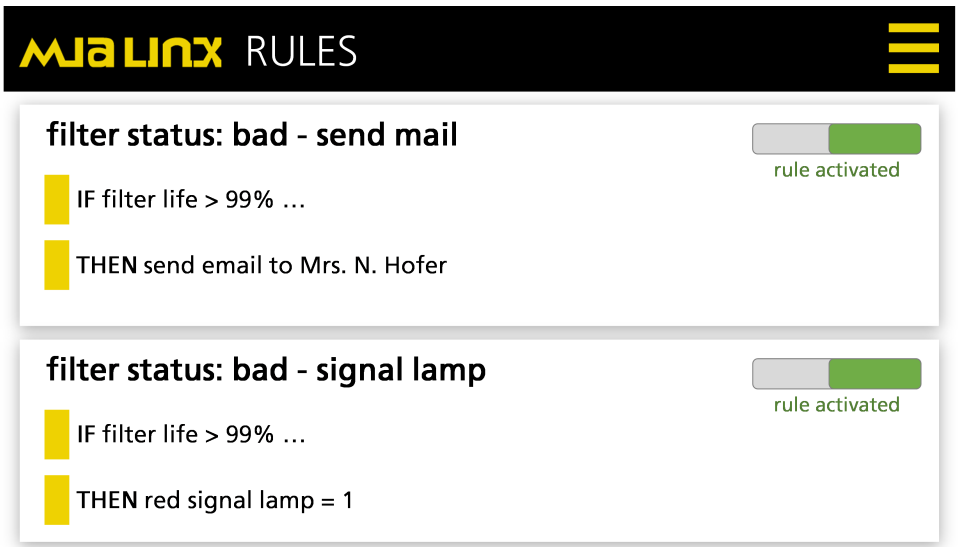
Easy and intuitive to use

The rules can be created and configured directly by the user in the web-based user interface. To add a rule, firstly a sensor is selected and, if applicable, parameters (e.g. for filtering) specified. Then an actuator and, if required, a configuration is chosen, such as the input of an email address to which the desired message should be sent. The rules created can be shared with other users, which also gives them the opportunity to evaluate or comment on them. This allows helpful rules to be adopted without the need for configuration; these can even be imple- mented as standard rules for the entire com- pany. To ensure security and data privacy, MIALinx can be run locally within a com-pany so that no data leaves the company network. An authorization concept enables sensors and actuators to be accessed at user or user group level. Besides the local solution, MIALinx can also be operated in a cloud: For example the secure federative platform "Virtual Fort Knox" for service-based manufacturing. Running MIALinx as a service allows the cloud-based connection between existing company soft- and hardware.

MIALinx and Virtual Fort Knox

MIALinx is a joint development of the Fraunhofer IPA and the Institute for Parallel and Distributed Systems of the University of Stuttgart and is funded by the Baden-Württemberg Stiftung.

Please contact us to discuss potential application scenarios in your company.



User interface of MIALinx

In cooperation with:

Universität Stuttgart
Institut für Parallele
und Verteilte Systeme

Funded by:

Baden-Württemberg Stiftung
WIR STIFTEN ZUKUNFT

www.mialinx.de