

„THE GREATEST ASSET IN MACHINE AND SYSTEM MANUFACTURING IS THE SOFTWARE.“

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The real know-how lies in the software

Due to Corona, digitalization has experienced a significant boost. Remote access and cloud computing have found their way into the machine hall. Greater digitalization goes hand in hand with more functionality, more modularity and more networking. Machine and systems are also becoming increasingly more complex. Here, an appropriate software solution is needed.

To design the application software as universal, as well as easily maintainable and expandable as possible, modern tools and approaches such as the object-oriented (OOP) enable sustainable machine concepts. With an object-oriented approach, machine manufacturers achieve maximum hardware independency. The software is also very clear, structured, and can be comfortably maintained and further developed over many years.

The software is an important distinguishing feature and the real know-how of the machine and system builder. With the application software, they can create customer benefits and individuality, as well as generate added value. We support them thereby with our object-oriented software suite LASAL, which combines all automation disciplines and supports cooperative development. The months living with corona and having to work from home has shown that software engineering teams in particular can work closely together even when far apart and there is a future for decentralized development.

Currently, no one can say how work environments will change... corona virus, skilled personnel shortages, dramatic changes in society. What is important however, is that the basic conditions for making decentralization possible and practical are created.

Here, object-orientation with LASAL offers great potential. Based on the overall project, software developers consider which functions are required in the machine and how these are connected to one another. With the top-down design, tasks and functions are separated and visually represented. Which machine components speak with one another, which exchange data. "No lines of code are required to understand

the function of the application. When the functions and communication interfaces are defined, development begins from the bottom-up.

Development tasks can thereby easily be divided over engineers or groups. These tasks can then be processed independently. Instead of programming, the user models standard machine functions in the graphic user interface via drag-and-drop from extensive libraries. Only after a certain timepoint it is necessary to combine individual software packages into a release and adapt them to one another. Interface problems are a thing of the past.

A further advantage of object-oriented design is that the hardware does not have to be available or defined. The software is decoupled from the hardware. This is enormously helpful for machine builders, as only during development, it often becomes clear what computing power, drive type, visualization power and display size are eventually optimal. Apropos Visualization: HTML5 visualizations provide maximum freedom in the selection of the target device and can be flexibly adapted to the HMI used.

Every machine builder knows that their greatest asset is the software and the knowledge to optimize the performance of their machines and minimize mechanical stress. Combined with modern hardware, the deciding added value is created for the customer. It is important to us that machine builders have a proven, highly flexible and user-friendly tool for visualization, PLC, motion, safety and communication that provides interoperability and sustainability. The code is graphically prepared and provides clear interfaces. Via this structure and the low-code approach, the code remains readable and easily adaptable - even after years and employee changes. The code is sustainable and can be clearly passed on. Changes in technology, which are sure to occur more frequently in today's world, can be handled with minimal effort.