



LIBERTY **PRO**

IEC61499 Solutions for
Machine Automation
by
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epis
Automation. Punktgenau.

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epis specialises in the automation of small to medium size machines. Designing the system exactly to your individual specifications.

We deliver the best individual technical and economic solution.

Punktgenau.



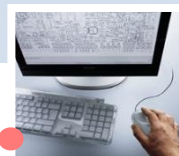
Control



HMI



Communi-
cation



Engineering



Software

Why IEC61499 in Machine Automation?



- **Machine Intelligence can be highly decentralized**
- **Increase in modularity and individual addons**
- **More focus on development cost due to**
 - **shorter product life cycles,**
 - **individual machine configurations,**
 - **shortage of engineers (splitting of the development)**
 - **...**
- **Need of change of hardware topology on a new machine generation**
- **M2M integration requirements are rapidly growing**
- **Requirements for Machine Software Certifications are increasing**

What's different in Machine Automation?



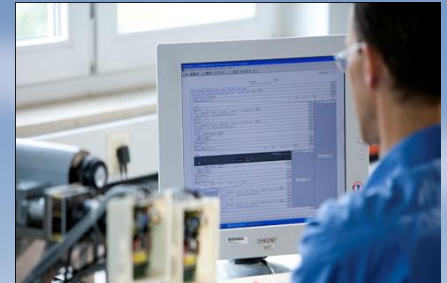
- Real Time Requirements of 0.1...10 msec
- Synchronization
- Use of CAN-Bus rather than Ethernet
- IEC-61131 is widely spread
 - Often combined with proprietary extensions
- Small variety of products used in one machine
- Special libraries are commonly expected for the different branches



LibertyPro - solutions for Machine Automation



- Fully IEC-61499 based
- Real Time expansion
- Special libraries for
 - Motion Control
 - Positioning
 - Electronic gears
 - Closed Loop Control
 - ...
- CAN Bus support
 - Cooperation with CiA (CAN in Automation)
- IEC-61131 Migration (future)



Solution Package – Material Storage Lifts



Application

- **Storage Lift with variable geometry (W x H)**
- **Navigate to shelf positions for loading and unloading of materials**
- **Administration of storage positions in the shelves**
- **Data exchange with ERP System**



THANK YOU

FOR YOUR

ATTENTION