

PB138 — Markups for Industry 4.0

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Industry 4.0

- Automated Test Markup Language (ATML): defines a standard exchange medium for sharing information between components of automatic test systems.

Automation Markup Language (AML)

- <https://www.automationml.org/o.red.c/home.html>
- AutomationML is a data format tailored to the needs of production system engineering.
- AutomationML: vendor-independent and industrial area neutral data format
- It can be applied for lossless data exchange along various chains of data processing systems (including engineering tools) of all industrial areas
- without licensing and application costs.

Where to use AML?

- To exchange engineering data along the entire life cycle of production systems;
- AML focuses on combining and adapting existing industry formats;
- AML addresses the most important requirement for consistent and lossless data exchange, namely the mapping of all design data that is relevant for at least two partners involved in the data exchange.

AML Structure

- **Topology information:** This information set describes the hierarchical structuring of the production system from the production system level, through the cell and resource levels down to the levels of the equipment and mechanical components
- **Mechanical properties:** This amount of information describes the mechanical design of the production system including its geometric and kinematic properties. It is usually developed as a technical drawing of a MCAD tool.
- **Electrical, pneumatic and hydraulic properties:** This information includes the electrical and fluidic design of the production system, including wiring and piping, as it might be produced with ECAD and FCAD tools.
- **Functions of the production system:** This information set serves to characterize the functions of the production system and its components. It includes behavioral models of uncontrolled (physical, chemical, etc.) behavior and controlled behavior.
- **Control of the production system:** This information contains all the information related to the control unit. These are the hardware configuration, control
- **Further information:** This information set subsumes further necessary information such as relevant business information like the manufacturers' article numbers or prices,

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