

Modelling control systems using IEC 61499: applying function blocks to distributed systems

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Abstrak

New technologies and standards are emerging which will have a dramatic effect on the design and implementation of future industrial control systems. PLCs and PC-based soft controllers are beginning to use software components, such as object-oriented technology, to bring together the hitherto different worlds of factory automation and business systems. New tools and techniques are needed to design and model these systems, such as UML and modern fieldbus technology.

The new IEC 61499 standard has been developed specifically to model distributed control systems, defining concepts and models so that software in the form of function blocks can be interconnected to define the behaviour of a distributed control system.

Tools based on IEC 61499 are likely to emerge soon to model, validate and simulate the behaviour of complex networks of function blocks and it is expected that this standard will become key to complex distributed systems.