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A Fractal Control System Architecture for Next Generation Factories

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Abstract

This paper presents the concept of the system architecture of a flexible cyber-physical factory control system. The system allows the automation of process structures using cyber-physical fractal nodes. These nodes have a functional and independent form and can be clustered to larger structures. This makes it possible to equip the factory with a flexible, freely scalable, modular system. The description of this system architecture and the associated rules and conditions is outlined in the concept.

Keywords: Cyber-Physical Systems; System Architecture; Control System