

STOCHASTIC REGULATION OF THE TECHNOLOGICAL AGGREGATES

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Abstract. The problem of stochastic regulation used in technological units to control equipment is investigated. Stochastic control takes into account the random nature of the data sample that statistically characterizes the accuracy and stability of automatic processes. Stochastic regulation is performed in the working area of the technological unit and at the level of the cloud containing mathematical tools for analyzing signatures. Data exchange at various levels of control is implemented in a telecommunication network built on the principle of the wireless Internet of Things. The structure of the basic element (technological unit) of cyber production is given. The mechanisms of network communication of technological units and the principles of network-centric control that are relevant for stochastic control are described. It is shown that defect-free automatic control of cyber-production uses algorithms that form the basis of machine learning methods. The advantages of computer-synthesized control of the mechanization of cyber-production by means of communication tools of the Internet of Things are described.

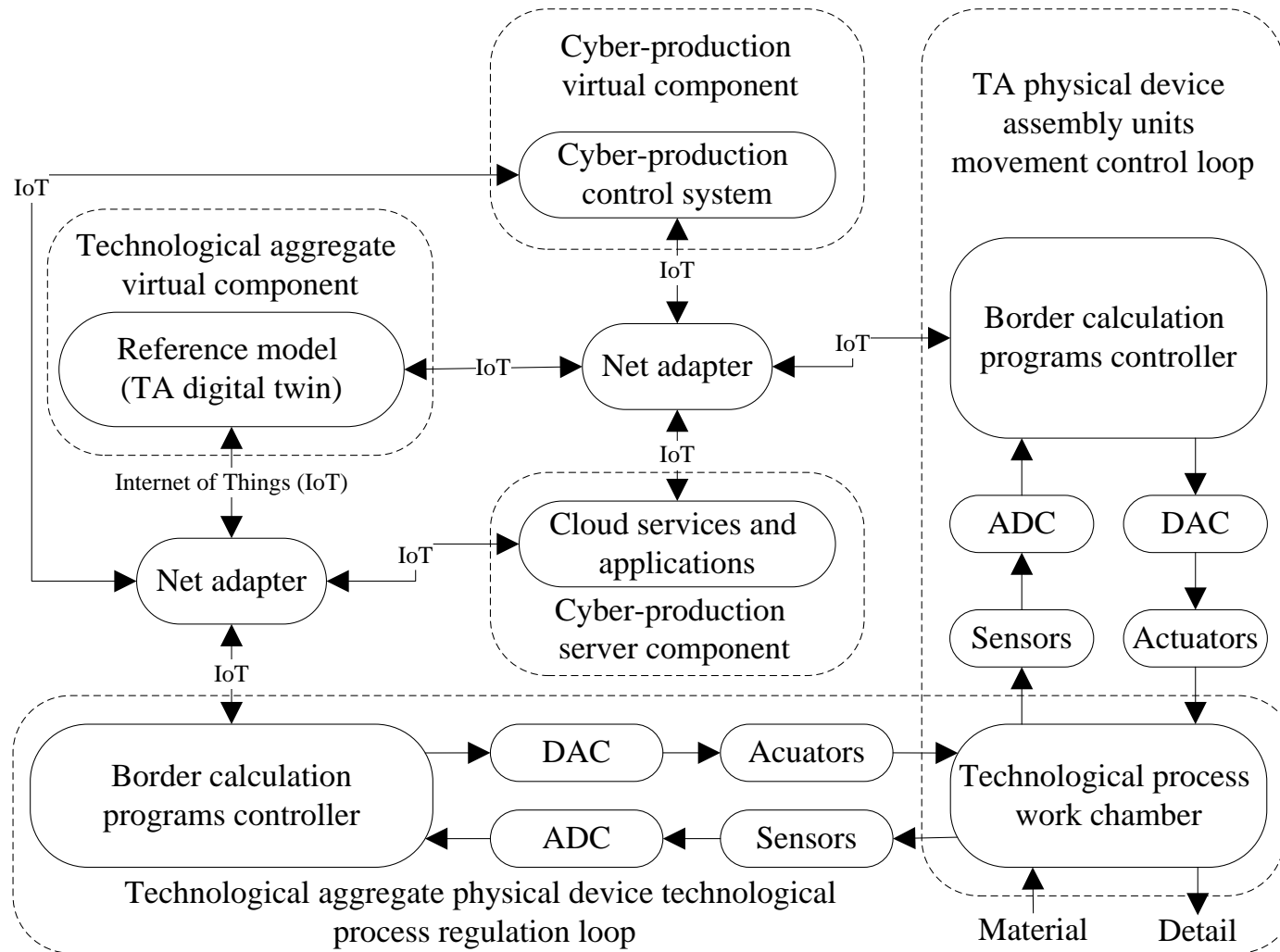


Figure 1. The cyber-production IoT architecture base element structure (ADC – analogue-digital converter, DAC – digital-analogue converter).