Investigation of asynchronous operation elimination algorithm for microprocessor system in MATLAB Simulink.

Eliseev D. A., Zelenin A. S., Kasyanov S. E.

An algorithm for eliminating the asynchronous operation for microprocessor systems is developed in the MATLAB Simulink. The developed algorithm is installed on an UEISIM microprocessor device with analog and discrete input and output. The model of the automatic device for eliminating the asynchronous operation is tested on a test model of the power system on a hardware and software complex for modeling power systems in real time (PAK RV, RTDS) in accordance with the certification test methodology given in the standard of JSC «SO UPS» STO 59012820.29.020.008-2015 Relay protection and automation. Automatic emergency control of power systems regimes. Automatic elimination of asynchronous operation. Norms and requirements.

Key words: asynchronous operation, asynchronous run, emergency control automatics, automatics for elimination of asynchronous operation, algorithm, microprocessor system, certification tests, RTDS, UEISIM, Matlab, Simulink, Simulink Embedded Coder, code generation.