Ontological Approach for Standards Development Within Industry 4.0

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Abstract: In this paper, we propose an approach to automating the processes of creating, developing and applying standards based on OSTIS Technology. The problems of modern approaches to the development, maintenance and application of standards are considered in detail, special attention is paid to standards in the field of Industry 4.0, such as ISA-88 and ISA-95, their role in the context of Industry 4.0 and problems specific to standards in this field are considered. The paper proposes an approach to the development of standards based on the ontological approach and involving the transformation of the

standard into a knowledge base developed by a distributed team of developers directly in the process of its use. It is proposed to use OSTIS Technology as the basis for building this kind of system. We consider a prototype information system for employees of a batch production enterprise that implements the proposed approach, as well as examples of the integration of such a system with production systems.

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