Service-oriented implementation model for smart transducers network

Н. Бежанић, И. Поровић

References:


Abstract:

This paper describes a new implementation model for the service-oriented smart transducers network based on the IEEE 1451 Web Services. The model enables simple service dislocation and addition of new functionalities in Service Oriented Architecture (SOA) network. Presented architectural organization supports new service-oriented network entities in addition to standard IEEE 1451 smart transducers. The entities such as particular transducer services and functionalities, processing applications and algorithms, and set of I/O devices are supported in the form of service providers managed by a central server. The entities are modeled as virtual transducers incorporated in the service-oriented network, and analysis on how this architectural change affects the smart transducer design constraints is given. The case study of a smart transducer network design in form of automated configuration and data exchange between ARM-based smart transducer interface module, central server and dislocated virtual transducer is presented

Keywords:

Service Oriented Architecture; Smart Transducer Web Services; Virtual Transducer; IEEE 1451 Smart Transducer; Web Service