

Enhancement of the SR5 robots to comply with the IEC61850 standard

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Abstract:

The paper describes the feasibility of using the IEC 61850 standard outside the scope of the substation automation. Implementing the standard to the SR5 robots would solve two questions. Can the IEC 61850 standard be used outside the scope of substation automation. Can we improve the data structure and communication of the robots with this standard? The result of the feasibility study demonstrated the flexibility of the IEC 61850 standard by applying the methods used by the standard to create virtual representations of the devices within the SR5 robots. Furthermore the implementation of the GOOSE protocol has proven to provide faster and reliable communication services. Further analysis would be needed to confirm if the mapping of the MMS protocol fits to the robot system.