



Smart transducer interfaces applied to health monitoring

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The paper presents a smart sensing system for health monitoring based on the IEEE 1451 standard. The system makes use of smart transducer interfaces, namely the 1451.1 information model and 1451.4 transducer data sheets. Attention is given to the implementation of the 1451.1 information model using the .NET Framework, including the customization efforts to meet the requirements of a specific application, which, in the present case, consists of a smart wheelchair prepared to monitor the user's physical condition. Experimental tests were done to characterize the sensing channels and to evaluate the communication capabilities of the system. Results are analyzed and conclusions extracted about the effectiveness of the system and its overall performance.

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I. Introduction

The paper presents a [health monitoring system that makes use of smart transducer interfaces](#) compliant with the IEEE 1451 std.

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