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| Project | **Specification of Sensor Interface for Cyber and Physical World**<<https://sagroups.ieee.org/2888/> **>** |
| Title | **Syntax and semantics of bend sensor** |
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| Re: |  |
| Abstract | This contribution illustrates the JSON schema structure for representing bend sensor data in the physical world in a standardized data format. The semantics and examples of the bend sensor information are presented.  |
| Purpose | To start discussion on purpose of the standard |
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# Introduction

This contribution illustrates the JSON schema structure for representing bend sensor data in a standardized data format in the physical world. The semantics and examples of the bend sensor information are presented.

# Bend sensor data

## General

This subclause specifies a sensor data type, which describes the bend sensor.

## Syntax

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| --- |
| "bendSensorData": { "type": "object", "properties": { "arrayBendValue": { "type": "array", "items": { "type": "array", "items": { "type": "number", "minimum": -360, "maximum": 360 }, "minItems": 1, "maxItems": 3 }, }, } "additionalProperties": false }, |
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## Semantics

Semantics of the bendSensorData:

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| Name | Definition |
| bendSensorData | Tool for describing sensor data concerning the glove sensor. |
| arrayBendValue  | It describes the set of sensed values by the bend sensor for the degrees on each joint. Each joint can have 1 to 3 axis. In the case of two axes, x and y, in the case of three axes, x, y, and z are described in order. |

## Examples

 In this example, a bend sensor has two joints. The first joint sensed values of 30 degrees on the x-axis, 60 degrees on the y-axis, and 0 degrees on the z-axis, and the second joint sensed values of -30 degrees on the x-axis, 45 degrees on the y-axis, and 0 degrees on the z-axis.

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| { "bendSensorData": { "arrayBendValue": [ [30, 60, 0],  [-30, 45, 0]  ] }} |