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| Project | **Specification of Sensor Interface for Cyber and Physical World**<<https://sagroups.ieee.org/2888/> **>** |
| Title | **Glove sensor for the large space VR training system** |
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| Re: |  |
| Abstract | This contribution illustrates the JSON schema structure for describing glove sensor data for the large space VR training system in a standardized data format. The semantics and examples of the glove 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 describing glove sensor data for the large space VR training system in a standardized data format. The semantics and examples of the glove sensor information are presented.

# Glove sensor data

## General

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

## Syntax

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| "gloveSensorData": { "type": "object", "properties": { "handSide" : { "type": "integer" "minimum": 0, "maximum": 1, },  "fingers": { "type": "array", "items": { "type": "object", "properties": { "fingerID": { "type": "integer", "minimum": 0, "maximum": 4 }, "degree": { "$ref": "#/definitions/bendSensorData" } }, "additionalProperties": false }, "maxItems": 5 } }, "additionalProperties": false }, |
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## Semantics

Semantics of the gloveSensorData:

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| Name | Definition |
| gloveSensorData | Tool for describing sensor data from the glove sensor. |
| handSide | It represents the hand side as a number.0: left hand, 1: right hand |
| fingers | It describes which finger is bent at which angle using fingerID and degree. |
| fingerID | It represents each finger as a number.0: thumb, 1: index finger, 2: middle finger, 3: ring finger, 4: little finger |
| degree | It indicates the degree of bend of the corresponding finger with bendSensorData. The angles of the joints are described in order from the tip of the hand to the palm. |

## Examples

This example is from the right-hand glove sensor, and each joint of the glove sensor has one axis. In this example, the thumb represents 90 and 15 degrees respectively from the tip of the hand, and the index finger represents 30 degrees in all three joints. The rest are straight like the “OK” hand sign.

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| {"gloveSensorData": { "handside: 1, "fingers": [ {"fingerID": 0,  "degree": { "arrayBendValue":[[90],[15]] } },  {"fingerID": 1,  "degree": { "arrayBendValue":[[30],[30],[30]] } },  {"fingerID": 2,  "degree": { "arrayBendValue":[[0],[0],[0]] } },  {"fingerID": 3,  "degree": { "arrayBendValue":[[0],[0],[0]] } },  {"fingerID": 4,  "degree": { "arrayBendValue":[[0],[0],[0]] } },  ] }} |