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| Project | **Specification of Sensor Interface for Cyber and Physical World**<<https://sagroups.ieee.org/2888/> **>** |
| Title | **Rigidbody sensor for the large space VR training system** |
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| Source(s) | Sang-Kyun Kim, goldmunt@gmail.com (Myongji University)Min Hyuk Jeong, jmh8900@gmail.com (Myongji University) |
| Re: |  |
| Abstract | This contribution illustrates the JSON schema structure for describing rigidbody sensor data for the large space VR training system in a standardized data format. The semantics and examples of the rigid body 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 rigidbody sensor data for the large space VR training system in a standardized data format. The semantics and examples of the rigid body sensor information are presented.

# Rigidbody sensor data

## General

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

## Syntax

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| "rigidbodySensorData": { "type": "object", "properties": { "position": { "type": "object", "properties": { "x": {"type": "number"}, "y": {"type": "number"}, "z": {"type": "number"} } } "orientationInQuaternion": { "type": "object", "properties": { "x": {"type": "number"}, "y": {"type": "number"}, "z": {"type": "number"}, "w": {"type": "number"} } }  } "additionalProperties": false }, |
|  |

## Semantics

Semantics of the rigidbodySensor:

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| Name | Definition |
| rigidbodySensorData | Tool for describing sensor data concerning the rigidbody sensor position and orientation. |
| position | It describes the position of the rigidbody sensor in a large space measured in meters. The position is defined as x, y, and z. |
| orientationInQuaternion | It describes the orientation of the rigidbody sensor in a large space. The quaternion is defined as x, y, z and w. |

## Examples

 In this example, the measured rigidbody sensor position has x, y, and z values of 12 meters, 20 meters, and 1.8 meters, respectively. And the sensor is oriented towards the x-axis and rotated 30 degrees around the x-axis.

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| {“sensedInfoBaseAttributes”: {},“rigidbodySensorData”: { “position”: { "x": 12, "y": 20, "z": 1.8 } "orientationInQuaternion": { "x": 1.0, "y": 0, "z": 0 "w": 30 }} |