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| Project | **Standard for Actuator Interface for Cyber and Physical World**<https://sagroups.ieee.org/2888/ **>** |
| Title | **Data Formats for Olfactory Related Actuator** |
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| Re: |  |
| Abstract | This contribution proposes syntaxes, semantics, and examples for representing olfactory related actuator information in the physical world in a standardized data format. |
| Purpose | To start discussion on purpose of the standard |
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# Introduction

This contribution proposes actuator command types which can generate olfactory related effect. It contains syntaxes, semantics, and examples for representing olfactory related actuator information in the physical world in a standardized data format.

2 Data formats for interfacing actuator command

* 1. Scent actuator
		1. General

This sub-clause specifies a actuator command type which can generate a scent effect.

* + 1. Syntax

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| "scentCommandData": { "type": "object", "properties": { "scent": {  "$ref": "#/definitions/scentType" }, "intensity": { "type": "integer", "minimum": 0, "maximum": 100 }, "intensityUnit": { "$ref": "#/definitions/unitType" } }}, |

* + 1. Semantics

Semantics of the scentCommandData:

| *Name* | *Definition* |
| --- | --- |
| scentCommandData | Provide a structure for describing a command for a scent actuator. |
| scent | Describes the scent that specific scent actuator can generate. The scent unit of the command value describes as a reference to a term that shall be using the scentType. |
| intensity | Describes the intensity that the scent actuator shall emit in percentage(%) with respect to the maximum intensity that the specific actuator can generate. |
| intensityUnit | Describes the intensity unit of the command value as a reference to a term that shall be using the unitType. |

* + 1. Examples

This example shows the description of a actuator command of scent effect with the following semantics. This scent actuator commands the intensity 5% of the maximum intensity with the scent “rose”.

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| {"commandInfoBaseAttributes": {},"scentCommandData": { "scent": "rose", "intensity": 5, "intensityUnit": "percentage" }} |