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| Project | **Standard for Actuator Interface for Cyber and Physical World**<https://sagroups.ieee.org/2888/ **>** |
| Title | **Data Formats for Sight Related Actuator** |
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| Re: |  |
| Abstract | This contribution proposes syntaxes, semantics, and examples for representing sight 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(actuator) command types which can generate sight related effect. It contains syntaxes, semantics, and examples for representing sight related actuator information in the physical world in a standardized data format. Sight related actuators include light actuator and flash actuator.

2 Data formats for interfacing actuator command

* 1. **Light actuator**
		1. **General**

This sub-clause specifies the actuator command type which can generate a light effect. //additional property

* + 1. **Syntax**

|  |
| --- |
| "lightCommandData": { "type": "object", "properties": { "color": { "$ref": "#/definitions/colorType" }, "intensity": { "type": "integer", "minimum": 0, "maximum": 100 } }, "additionalProperties": false }, |

* + 1. **Semantics**

The semantics of the lightCommandData:

|  |  |
| --- | --- |
| *Name* | *Definition* |
| lightCommandData | Provide a structure for describing a command for a light actuator. |
| color | Describes the color that the light actuator can provide either as a reference to a term that shall be using the colorType. |
| intensity | Describes the intensity that the lighting actuator shall emit in percentage with respect to the maximum intensity that the specific actuator can generate. |

* + 1. **Examples**

This example shows the description of the actuator command of light effect with the following semantics. This light actuator is commanded to perform the intensity of 60% of the maximum intensity with the color “blue”.

|  |
| --- |
| { "commandInfoBaseAttributes": {}, "lightCommandData": { "color": "blue", "intensity": 60 }} |

* 1. **Flash actuator**
		1. **General**

This Subclause specifies a actuator command type which can generate a flash effect.

* + 1. **Syntax**

|  |
| --- |
| "flashCommandData": { "type": "object", "properties": { "lightCommandData":{ "$ref": "#/definitions/lightCommandData" }, "frequency": { "type": "integer", "minumum": 0, "maximum": 100 } }, "additionalProperties": false }, |

* + 1. **Semantics**

Semantics of the flashCommandData:

|  |  |
| --- | --- |
| *Name* | *Definition* |
| flashCommandData | Provide a structure for describing a command for a flash actuator. |
| lightCommandData | Provide a structure for describing a command for a light actuator. |
| frequency | Describes the intensity that the flash actuator shall emit in percentage with respect to the maximum intensity that the specific actuator can generate. |

* + 1. **Example**

This example shows the description of the actuator command of flash effect with the following semantics. This flash actuator is commanded to perform the light intensity is 60% of the maximum intensity and frequency is 50% of the maximum frequency.

|  |
| --- |
| { "commandInfoBaseAttributes": {}, "flashCommandData": { "lightCommandData": { "intensity": 60 }, "frequency": 50  }} |