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| Project | **Specification of Sensor Interface for Cyber and Physical World**  <<https://sagroups.ieee.org/2888.1/> **>** |
| Title | **Application programming interfaces for environment-related smart sensors** |
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| Re: |  |
| Abstract | This contribution illustrates the application programming interfaces for environment-related sensors. |
| Purpose | To start discussion on purpose of the standard |
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# Introduction

This contribution illustrates the application programming interfaces for environment-related sensors.

## Ambient light sensor

Table 1 – Ambient light sensor API

|  |  |
| --- | --- |
| Nested Classes | |
| Modifier and Type | Method and Description |
|  |  |
| Constructor | |
| Constructor and Description | |
| AmbientLight() | |
| *Default constructor.* | |
|  | |
| AmbientLight(String id) | |
|  | |
| AmbientLight(String id, String serverIPAddress, integer serverPort) | |
|  | |
| Fields | |
| Modifier and Type | Field and Description |
|  |  |
| Methods | |
| Modifier and Type | Method and Description |
| JSONObject | getAmbientLightSensorData() |
|  | *This function returns sensor data from an ambient light sensor in JSON format.* |
|  |  |

## Ambient noise sensor

Table 2 – Ambient noise sensor API

|  |  |
| --- | --- |
| Nested Classes | |
| Modifier and Type | Method and Description |
|  |  |
| Constructor | |
| Constructor and Description | |
| AmbientNoise() | |
| *Default constructor.* | |
|  | |
| AmbientNoise(String id) | |
|  | |
| AmbientNoise(String id, String serverIPAddress, integer serverPort) | |
|  | |
| Fields | |
| Modifier and Type | Field and Description |
|  |  |
| Methods | |
| Modifier and Type | Method and Description |
| JSONObject | getAmbientNoiseSensorData() |
|  | *This function returns sensor data from an ambient noise sensor in JSON format.* |
|  |  |

## Temperature sensor

Table 3 – Temperature sensor API

|  |  |
| --- | --- |
| Nested Classes | |
| Modifier and Type | Method and Description |
|  |  |
| Constructor | |
| Constructor and Description | |
| Temperature() | |
| *Default constructor.* | |
|  | |
| Temperature(String id) | |
|  | |
| Temperature(String id, String serverIPAddress, integer serverPort) | |
|  | |
| Fields | |
| Modifier and Type | Field and Description |
|  |  |
| Methods | |
| Modifier and Type | Method and Description |
| JSONObject | getTemperatureSensorData() |
|  | *This function returns sensor data from a temperature sensor in JSON format.* |
|  |  |

## Humidity sensor

Table 4 – Humidity sensor API

|  |  |
| --- | --- |
| Nested Classes | |
| Modifier and Type | Method and Description |
|  |  |
| Constructor | |
| Constructor and Description | |
| Humidity() | |
| *Default constructor.* | |
|  | |
| Humidity(String id) | |
|  | |
| Humidity(String id, String serverIPAddress, integer serverPort) | |
|  | |
| Fields | |
| Modifier and Type | Field and Description |
|  |  |
| Methods | |
| Modifier and Type | Method and Description |
| JSONObject | getHumiditySensorData() |
|  | *This function returns sensor data from a humidity sensor in JSON format.* |
|  |  |

## Wind sensor

Table 5 – Wind sensor API

|  |  |
| --- | --- |
| Nested Classes | |
| Modifier and Type | Method and Description |
|  |  |
| Constructor | |
| Constructor and Description | |
| Wind() | |
| *Default constructor.* | |
|  | |
| Wind(String id) | |
|  | |
| Wind(String id, String serverIPAddress, integer serverPort) | |
|  | |
| Fields | |
| Modifier and Type | Field and Description |
|  |  |
| Methods | |
| Modifier and Type | Method and Description |
| JSONObject | getWindSensorData() |
|  | *This function returns sensor data from a wind sensor in JSON format.* |
|  |  |

## Gas sensor

Table 6 – Gas sensor API

|  |  |
| --- | --- |
| Nested Classes | |
| Modifier and Type | Method and Description |
|  |  |
| Constructor | |
| Constructor and Description | |
| Gas() | |
| *Default constructor.* | |
|  | |
| Gas(String id) | |
|  | |
| Gas(String id, String serverIPAddress, integer serverPort) | |
|  | |
| Fields | |
| Modifier and Type | Field and Description |
|  |  |
| Methods | |
| Modifier and Type | Method and Description |
| JSONObject | getGasSensorData() |
|  | *This function returns sensor data from a gas sensor in JSON format.* |
|  |  |

## Dust sensor

Table 7 – Dust sensor API

|  |  |
| --- | --- |
| Nested Classes | |
| Modifier and Type | Method and Description |
|  |  |
| Constructor | |
| Constructor and Description | |
| Dust() | |
| *Default constructor.* | |
|  | |
| Dust(String id) | |
|  | |
| Dust(String id, String serverIPAddress, integer serverPort) | |
|  | |
| Fields | |
| Modifier and Type | Field and Description |
|  |  |
| Methods | |
| Modifier and Type | Method and Description |
| JSONObject | getDustSensorData() |
|  | *This function returns sensor data from a dust sensor in JSON format.* |
|  |  |

## Weather

Table 7 – Weather sensor API

|  |  |
| --- | --- |
| Nested Classes | |
| Modifier and Type | Method and Description |
|  |  |
| Constructor | |
| Constructor and Description | |
| Weather() | |
| *Default constructor.* | |
|  | |
| Weather(String id) | |
|  | |
| Weather(String id, String serverIPAddress, integer serverPort) | |
|  | |
| Fields | |
| Modifier and Type | Field and Description |
|  |  |
| Methods | |
| Modifier and Type | Method and Description |
| JSONObject | getWeatherSensorData() |
|  | *This function returns sensor data from a weather sensor in JSON format.* |
|  |  |