

OCF “Ipanema” – Add UVA & UVB sensor resource – Data Model WG CR 3404

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UVA Radiation

1.1.1 Introduction

This Resource specifies UV radiation measurement.

The Property "measurement" is the current measured UVA. The intensity of UV radiation is measured in the units of milliwatts per square centimeter (mW/cm²) which is energy per square centimeter received per second. UVA is measured between 315 and 400 nanometers in the electromagnetic spectrum.

1.1.2 Example URI

/UVRadiationResURI

1.1.3 Resource type

The Resource Type is defined as: "oic.r.sensor.radiation.uva".

1.1.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "UVA Radiation",
    "version": "2020-08-13",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/L
ICENSE.md",
      "x-copyright": "copyright 2020 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/UVRadiationResURI" : {
      "get": {
        "description": "This Resource specifies UV radiation measurement.\n\nThe Property
\nmeasurement\n is the current measured UVA. The intensity of UV radiation is measured in the units
of milliwatts per square centimeter (mW/cm2) which is energy per square centimeter received per
second. UVA is measured between 315 and 400 nanometers in the electromagnetic spectrum.",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example":
            {
              "rt": ["oic.r.sensor.radiation.uva"],
              "if": ["oic.if.s", "oic.if.baseline"],
              "measurement": 23.5
            }
          },
          "schema": { "$ref": "#/definitions/UVARadiation" }
        }
      }
    }
  },
  "parameters": {
    "interface": {
      "in": "query",
      "name": "if",
      "type": "string",
      "enum": ["oic.if.s", "oic.if.baseline"]
    }
  }
}
```

```

},
"definitions": {
  "UVARadiation" : {
    "properties": {
      "rt": {
        "description": "The Resource Type.",
        "items": {
          "enum": ["oic.r.sensor.radiation.uva"],
          "maxLength": 64,
          "type": "string"
        },
        "minItems": 1,
        "uniqueItems": true,
        "readOnly": true,
        "type": "array"
      },
      "measurement": {
        "description": "The measured UVA.",
        "readOnly": true,
        "type": "number",
        "minimum": 0
      },
      "n": {
        "$ref":
"https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-schema.json#/definitions/n"
      },
      "id": {
        "$ref":
"https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-schema.json#/definitions/id"
      },
      "if" :
      {
        "description": "The OCF Interface set supported by this Resource.",
        "items": {
          "enum": [
            "oic.if.s",
            "oic.if.baseline"
          ],
          "type": "string"
        },
        "minItems": 2,
        "uniqueItems": true,
        "readOnly": true,
        "type": "array"
      }
    },
    "type": "object",
    "required": ["measurement"]
  }
}
}

```

1.1.5 Property definition

<Table Reference Here> defines the Properties that are part of the "oic.r.sensor.radiation.uva" Resource Type.

Table 1 – The Property definitions of the Resource with type "rt" = "oic.r.sensor.radiation.uva".

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
measurement	number	Yes	Read Only	The measured UVA.
n	multiple types: see schema	No	Read Write	

id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

1.1.6 CRUDN behaviour

<Table Reference Here> defines the CRUDN operations that are supported on the "oic.r.sensor.radiation.uva" Resource Type.

Table 2 – The CRUDN operations of the Resource with type "rt" = "oic.r.sensor.radiation.uva".

Create	Read	Update	Delete	Notify
	get			observe

1.2 UVB Radiation

1.2.1 Introduction

This Resource specifies UV radiation measurement.

The Property "measurement" is the current measured UVB. The intensity of UV radiation is measured in the units of milliwatts per square centimeter (mW/cm²) which is energy per square centimeter received per second. UVB is measured between 280 and 315 nanometers in the electromagnetic spectrum.

1.2.2 Example URI

/UVRadiationResURI

1.2.3 Resource type

The Resource Type is defined as: "oic.r.sensor.radiation.uvb".

1.2.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "UVB Radiation",
    "version": "2020-08-13",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LICENSE.md",
      "x-copyright": "copyright 2020 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/UVRadiationResURI" : {
      "get": {
        "description": "This Resource specifies UV radiation measurement.\n\nThe Property\n\n\"measurement\"\n\nis the current measured UVB. The intensity of UV radiation is measured in the units\n\nof milliwatts per square centimeter (mW/cm2) which is energy per square centimeter received per\n\nsecond. UVB is measured between 280 and 315 nanometers in the electromagnetic spectrum.",
        "parameters": [
          {
            "$ref": "#/parameters/interface"
          }
        ],
        "responses": {
          "200": {

```

```

        "description" : "",
        "x-example":
        {
            "rt": ["oic.r.sensor.radiation.uvb"],
            "if": ["oic.if.s", "oic.if.baseline"],
            "measurement": 35.5
        }
    },
    "schema": { "$ref": "#/definitions/UVBRadiation" }
}
}
},
"parameters": {
    "interface": {
        "in": "query",
        "name": "if",
        "type": "string",
        "enum": ["oic.if.s", "oic.if.baseline"]
    }
},
"definitions": {
    "UVBRadiation" : {
        "properties": {
            "rt": {
                "description": "The Resource Type.",
                "items": {
                    "enum": ["oic.r.sensor.radiation.uvb"],
                    "maxLength": 64,
                    "type": "string"
                },
                "minItems": 1,
                "uniqueItems": true,
                "readOnly": true,
                "type": "array"
            },
            "measurement": {
                "description": "The measured UVB.",
                "readOnly": true,
                "type": "number",
                "minimum": 0
            },
            "n": {
                "$ref":
                "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
                schema.json#/definitions/n"
            },
            "id": {
                "$ref":
                "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
                schema.json#/definitions/id"
            },
            "if" :
            {
                "description": "The OCF Interface set supported by this Resource.",
                "items": {
                    "enum": [
                        "oic.if.s",
                        "oic.if.baseline"
                    ],
                    "type": "string"
                },
                "minItems": 2,
                "uniqueItems": true,
                "readOnly": true,
                "type": "array"
            }
        },
        "type": "object",
        "required": ["measurement"]
    }
}

```

```
}  
}  
}
```

1.2.5 Property definition

<Table Reference Here> defines the Properties that are part of the "oic.r.sensor.radiation.uvb" Resource Type.

Table 3 – The Property definitions of the Resource with type "rt" = "oic.r.sensor.radiation.uvb".

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
measurement	number	Yes	Read Only	The measured UVB.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

1.2.6 CRUDN behaviour

<Table Reference Here> defines the CRUDN operations that are supported on the "oic.r.sensor.radiation.uvb" Resource Type.

Table 4 – The CRUDN operations of the Resource with type "rt" = "oic.r.sensor.radiation.uvb".

Create	Read	Update	Delete	Notify
	get			observe