

OCF “Ipanema” – New Resource Types for Environmental Sound – Data Model WG CR 3406

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1.1 Sound Pressure in Pascal

1.1.1 Introduction

This Resource describes a measured sound pressure in Pascal (pa).

The Sound pressure is a property of the sound field at a point in space where the point is the actual location of the sensor.

1.1.2 Example URI

/SoundPressureResURI

1.1.3 Resource type

The Resource Type is defined as: "oic.r.sound.pressure".

1.1.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Sound Pressure in Pascal",
    "version": "2020-09-01",
    "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": {
    "/SoundPressureResURI" : {
      "get": {
        "description": "This Resource describes a measured sound pressure in Pascal (pa).\n The
Sound pressure is a property of the sound field at a point in space where the point is the actual
location of the sensor.",
        "parameters": [
          {"$ref": "#/parameters/interface"}
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.sound.pressure"],
              "if": ["oic.if.s", "oic.if.baseline"],
              "soundpa": 0.002
            },
            "schema": { "$ref": "#/definitions/SoundPressure" }
          }
        }
      }
    }
  },
  "parameters": {
    "interface" : {
      "in": "query",
      "name": "if",
      "type": "string",
      "enum": ["oic.if.s", "oic.if.baseline"]
    }
  },
  "definitions": {
    "SoundPressure" : {
      "properties": {
        "rt": {
```

```

    "description": "The Resource Type.",
    "items": {
      "enum": ["oic.r.sound.pressure"],
      "maxLength": 64,
      "type": "string"
    },
    "minItems": 1,
    "uniqueItems": true,
    "readOnly": true,
    "type": "array"
  },
  "soundpa": {
    "description": "The sound pressure in pascal.",
    "type": "number",
    "readOnly": true,
    "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": ["soundpa"]
}
}
}

```

1.1.5 Property definition

<Table Reference Here> defines the Properties that are part of the "oic.r.sound.pressure" Resource Type.

Table 1 – The Property definitions of the Resource with type "rt" = "oic.r.sound.pressure".

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
soundpa	number	Yes	Read Only	The sound pressure in pascal.
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.
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1.1.6 CRUDN behaviour

<Table Reference Here> defines the CRUDN operations that are supported on the "oic.r.sound.pressure" Resource Type.

Table 2 – The CRUDN operations of the Resource with type "rt" = "oic.r.sound.pressure".

Create	Read	Update	Delete	Notify
	get			observe

1.2 Sound Pressure Level in dB

1.2.1 Introduction

This Resource describes a measured sound pressure in dB.

The Sound pressure is a property of the sound field at a point in space where the point is the actual location of the sensor.

1.2.2 Example URI

/SoundPressureLevelResURI

1.2.3 Resource type

The Resource Type is defined as: "oic.r.sound.pressurelevel".

1.2.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Sound Pressure Level in dB",
    "version": "2020-09-01",
    "license": {
      "name": "OCF Data Model License",
      "url": "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LICENCE.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": {
    "/SoundPressureLevelResURI" : {
      "get": {
        "description": "This Resource describes a measured sound pressure in dB.\n The Sound pressure is a property of the sound field at a point in space where the point is the actual location of the sensor.",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.sound.pressurelevel"],
              "if": ["oic.if.s", "oic.if.baseline"],
              "sounddB": 40.3
            },
            "schema": { "$ref": "#/definitions/SoundPressureLevel" }
          }
        }
      }
    }
  }
}
```

```

    }
  },
  "parameters": {
    "interface": {
      "in": "query",
      "name": "if",
      "type": "string",
      "enum": ["oic.if.s", "oic.if.baseline"]
    }
  },
  "definitions": {
    "SoundPressureLevel": {
      "properties": {
        "rt": {
          "description": "The Resource Type.",
          "items": {
            "enum": ["oic.r.sound.pressurelevel"],
            "maxLength": 64,
            "type": "string"
          },
          "minItems": 1,
          "uniqueItems": true,
          "readOnly": true,
          "type": "array"
        },
        "sounddB": {
          "description": "The sound pressure level in dB.",
          "type": "number",
          "readOnly": true,
          "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": ["sounddB"]
    }
  }
}

```

1.2.5 Property definition

<Table Reference Here> defines the Properties that are part of the "oic.r.sound.pressurelevel" Resource Type.

Table 3 – The Property definitions of the Resource with type "rt" = "oic.r.sound.pressurelevel".

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
sounddB	number	Yes	Read Only	The sound pressure level in dB.
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.sound.pressurelevel" Resource Type.

Table 4 – The CRUDN operations of the Resource with type "rt" = "oic.r.sound.pressurelevel".

Create	Read	Update	Delete	Notify
	get			observe