OCF "Essen" – New Healthcare Device Types – Data Model WG CR 2884

Legal Disclaimer

1.1 Cadence

1.1.1 Introduction

This Resource describes the cadence, which is the number of revolutions of crank per minute when cyclists pedal the pedals.
 The unit, which is the default unit, is rpm (revolutions per minute).
 The cadence Property is a read-only value that is provided by the server.
 When range (from "oic.r.baseresource") is omitted the default is 0 to +MAXFLOAT.

1.1.2 Example URI

/CadenceResURI

1.1.3 Resource type

The Resource Type is defined as: "oic.r.cadence".

1.1.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Cadence",
    "version": "2019-06-11",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/L
ICENSE.md",
      "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": [
    "http"
  ],
  "consumes": [
    "application/json"
  ],
  "produces": [
    "application/json"
  ],
  "paths": {
    "/CadenceResURI": {
      "get": {
        "description": "This Resource describes the cadence, which is the number of revolutions of
crank per minute when cyclists pedal the pedals.\n The unit, which is the default unit, is rpm
(revolutions per minute).\n The cadence Property is a read-only value that is provided by the
server.\n When range (from \"oic.r.baseresource\") is omitted the default is 0 to +MAXFLOAT.",
        "parameters": [
          {
            "$ref": "#/parameters/interface"
          }
        ],
        "responses": {
         "200": {
           "description": "",
           "x-example": {
             "rt": [
               "oic.r.cadence"
             ],
             "cadence": 60
           },
           "schema": {
             "$ref": "#/definitions/Cadence"
           }
```

```json
              }
            }
          }
        }
      },
      "parameters": {
        "interface": {
          "in": "query",
          "name": "if",
          "type": "string",
          "enum": [
            "oic.if.s",
            "oic.if.baseline"
          ]
        }
      },
      "definitions": {
        "Cadence": {
          "properties": {
            "cadence": {
              "description": "This Property describes the rate at which a cyclist is pedalling/turning the pedals.",
              "type": "integer",
              "minimum": 0,
              "readOnly": true
            },
            "rt": {
              "description": "The Resource Type.",
              "items": {
                "enum": [
                  "oic.r.cadence"
                ],
                "type": "string"
              },
              "minItems": 1,
              "uniqueItems": true,
              "readOnly": true,
              "type": "array"
            },
            "n": {
              "$ref": "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-schema.json#/definitions/n"
            },
            "if": {
              "description": "The OCF Interface set supported by this Resource.",
              "items": {
                "enum": [
                  "oic.if.s",
                  "oic.if.baseline"
                ],
                "type": "string"
              },
              "minItems": 1,
              "uniqueItems": true,
              "readOnly": true,
              "type": "array"
            },
            "range": {
              "$ref": "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-schema.json#/definitions/range_integer"
            },
            "step": {
              "$ref": "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-schema.json#/definitions/step_integer"
            }
          },
          "type": "object",
          "required": [
```

```
        "cadence"
      ]
    }
  }
}
```

1.1.5   Property definition

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

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

Property name	Value type	Mandatory	Access mode	Description
cadence	integer	Yes	Read Only	This Property describes the rate at which a cyclist is pedalling/turning the pedals.
rt	array: see schema	No	Read Only	The Resource Type.
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	

1.1.6   CRUDN behaviour

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

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

Create	Read	Update	Delete	Notify
	get			observe

1.2   Cycling Power

1.2.1   Introduction

This Resource describes the cycling power, which is the amount of energy transferred or converted per unit time.
 The unit, which is the default SI (International System of Units) unit, is W (watts, which is equal to one joule per second).
 The power Property is a read-only value that is provided by the server.
 When range (from "oic.r.baseresource") is omitted the default is 0 to +MAXFLOAT.

1.2.2   Example URI

/CyclingPowerResURI

1.2.3 Resource type

The Resource Type is defined as: "oic.r.cyclingpower".

1.2.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Cycling Power",
    "version": "2019-06-11",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/L
ICENSE.md",
      "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": [
    "http"
  ],
  "consumes": [
    "application/json"
  ],
  "produces": [
    "application/json"
  ],
  "paths": {
    "/CyclingPowerResURI": {
      "get": {
        "description": "This Resource describes the cycling power, which is the amount of energy
transferred or converted per unit time.\n The unit, which is the default SI (International System
of Units) unit, is W (watts, which is equal to one joule per second).\n The power Property is a
read-only value that is provided by the server.\n When range (from \"oic.r.baseresource\") is
omitted the default is 0 to +MAXFLOAT.",
        "parameters": [
          {
            "$ref": "#/parameters/interface"
          }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": [
                "oic.r.cyclingpower"
              ],
              "power": 200.0,
              "power-left": 100.0,
              "power-right": 100.0
            },
            "schema": {
              "$ref": "#/definitions/CyclingPower"
            }
          }
        }
      }
    }
  },
  "parameters": {
    "interface": {
      "in": "query",
      "name": "if",
      "type": "string",
      "enum": [
        "oic.if.s",
        "oic.if.baseline"
      ]
    }
```

```json
    },
    "definitions": {
      "CyclingPower": {
        "properties": {
          "power": {
            "description": "The current overall power output in watts.",
            "$ref": "#/definitions/power"
          },
          "power-left": {
            "description": "The current power output in watts from the left pedal.",
            "$ref": "#/definitions/power"
          },
          "power-right": {
            "description": "The current power output in watts from the right pedal.",
            "$ref": "#/definitions/power"
          },
          "rt": {
            "description": "The Resource Type.",
            "items": {
              "enum": [
                "oic.r.cyclingpower"
              ],
              "type": "string"
            },
            "minItems": 1,
            "uniqueItems": true,
            "readOnly": true,
            "type": "array"
          },
          "n": {
            "$ref":
"https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
schema.json#/definitions/n"
          },
          "if": {
            "description": "The OCF Interface set supported by this Resource.",
            "items": {
              "enum": [
                "oic.if.s",
                "oic.if.baseline"
              ],
              "type": "string"
            },
            "minItems": 1,
            "uniqueItems": true,
            "readOnly": true,
            "type": "array"
          },
          "range": {
            "$ref":
"https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
schema.json#/definitions/range_number"
          },
          "step": {
            "$ref":
"https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
schema.json#/definitions/step_number"
          }
        },
        "type": "object",
        "required": [
          "power"
        ]
      },
      "power": {
        "description": "This Resource describes the power, which is the amount of energy transferred
or converted per unit time, in W (watts, which is equal to one joule per second).",
        "type": "number",
        "minimum": 0.0,
        "readOnly": true
      }
```

```
    }
}
```

1.2.5   Property definition

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

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

Property name	Value type	Mandatory	Access mode	Description
power	multiple types: see schema	Yes	Read Write	The current overall power output in watts.
power-left	multiple types: see schema	No	Read Write	The current power output in watts from the left pedal.
power-right	multiple types: see schema	No	Read Write	The current power output in watts from the right pedal.
rt	array: see schema	No	Read Only	The Resource Type.
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	

1.2.6   CRUDN behaviour

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

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

Create	Read	Update	Delete	Notify
	get			observe

1.3   Speed

1.3.1   Introduction

This Resource describes the speed of an object, which is the magnitude of its velocity.
The unit, which is the default SI (International System of Units) unit, is metres per second.
The speed Property is a read-only value that is provided by the server.
When range (from "oic.r.baseresource") is omitted the default is 0 to +MAXFLOAT.

1.3.2   Example URI

/SpeedResURI

1.3.3 Resource type

The Resource Type is defined as: "oic.r.speed".

1.3.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Speed",
    "version": "2019-05-13",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/L
ICENSE.md",
      "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": [
    "http"
  ],
  "consumes": [
    "application/json"
  ],
  "produces": [
    "application/json"
  ],
  "paths": {
    "/SpeedResURI": {
      "get": {
        "description": "This Resource describes the speed of an object, which is the magnitude of
its velocity.\n The unit, which is the default SI (International System of Units) unit, is metres
per second.\n The speed Property is a read-only value that is provided by the server.\n When range
(from \"oic.r.baseresource\") is omitted the default is 0 to +MAXFLOAT.",
        "parameters": [
          {
            "$ref": "#/parameters/interface"
          }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": [
                "oic.r.speed"
              ],
              "speed": 10.0
            },
            "schema": {
              "$ref": "#/definitions/Speed"
            }
          }
        }
      }
    }
  },
  "parameters": {
    "interface": {
      "in": "query",
      "name": "if",
      "type": "string",
      "enum": [
        "oic.if.s",
        "oic.if.baseline"
      ]
    }
  },
  "definitions": {
    "Speed": {
```

```
      "properties": {
        "speed": {
          "description": "This Property describes the speed of an object in metres per second (SI
Unit). It should be noted, however, that the most common unit of speed everyday usage is the
kilometre per hour or, in the US and the UK, miles per hour.",
          "type": "number",
          "minimum": 0.0,
          "readOnly": true
        },
        "rt": {
          "description": "The Resource Type.",
          "items": {
            "enum": [
              "oic.r.speed"
            ],
            "type": "string"
          },
          "minItems": 1,
          "uniqueItems": true,
          "readOnly": true,
          "type": "array"
        },
        "n": {
          "$ref":
"https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
schema.json#/definitions/n"
        },
        "if": {
          "description": "The OCF Interface set supported by this Resource.",
          "items": {
            "enum": [
              "oic.if.s",
              "oic.if.baseline"
            ],
            "type": "string"
          },
          "minItems": 1,
          "uniqueItems": true,
          "readOnly": true,
          "type": "array"
        },
        "range": {
          "$ref":
"https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
schema.json#/definitions/range_number"
        },
        "step": {
          "$ref":
"https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
schema.json#/definitions/step_number"
        }
      },
      "type": "object",
      "required": [
        "speed"
      ]
    }
  }
}
```

1.3.5 Property definition

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

Table 5 – The Property definitions of the Resource with type "rt" = "oic.r.speed".

Property name	Value type	Mandatory	Access mode	Description
speed	number	Yes	Read Only	This Property describes the speed of an

				object in metres per second (SI Unit). It should be noted, however, that the most common unit of speed everyday usage is the kilometres per hour or, in the US and the UK, miles per hour.
rt	array: see schema	No	Read Only	The Resource Type.
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	

1.3.6 CRUDN behaviour

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

Table 6 – The CRUDN operations of the Resource with type "rt" = "oic.r.speed".

Create	Read	Update	Delete	Notify
	get			observe

1.4 Torque

1.4.1 Introduction

This Resource describes the torque, which is the rotational equivalent of linear force.
 The unit, which is the default SI (International System of Units) unit, is N·m (Newton metre).
 The torque Property is a read-only value that is provided by the server.
 When range (from "oic.r.baseresource") is omitted the default is 0 to +MAXFLOAT.

1.4.2 Example URI

/TorqueResURI

1.4.3 Resource type

The Resource Type is defined as: "oic.r.torque".

1.4.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Torque",
    "version": "2019-05-13",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/L
ICENSE.md",
      "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": [
    "http"
  ],
  "consumes": [
    "application/json"
  ],
  "produces": [
    "application/json"
  ],
  "paths": {
    "/TorqueResURI": {
      "get": {
        "description": "This Resource describes the torque, which is the rotational equivalent of
linear force.\n The unit, which is the default SI (International System of Units) unit, is N·m
(Newton metre).\n The torque Property is a read-only value that is provided by the server.\n When
range (from \"oic.r.baseresource\") is omitted the default is 0 to +MAXFLOAT.",
        "parameters": [
          {
            "$ref": "#/parameters/interface"
          }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": [
                "oic.r.torque"
              ],
              "torque": 10.0
            },
            "schema": {
              "$ref": "#/definitions/Torque"
            }
          }
        }
      }
    }
  },
  "parameters": {
    "interface": {
      "in": "query",
      "name": "if",
      "type": "string",
      "enum": [
        "oic.if.s",
        "oic.if.baseline"
      ]
    }
  },
  "definitions": {
    "Torque": {
      "properties": {
        "torque": {
          "description": "This Resource describes the torque, which is the rotational equivalent of
linear force, in N·m (Newton metre).",
```

```
          "type": "number",
          "minimum": 0.0,
          "readOnly": true
        },
        "rt": {
          "description": "The Resource Type.",
          "items": {
            "enum": [
              "oic.r.torque"
            ],
            "type": "string"
          },
          "minItems": 1,
          "uniqueItems": true,
          "readOnly": true,
          "type": "array"
        },
        "n": {
          "$ref":
"https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
schema.json#/definitions/n"
        },
        "if": {
          "description": "The OCF Interface set supported by this Resource.",
          "items": {
            "enum": [
              "oic.if.s",
              "oic.if.baseline"
            ],
            "type": "string"
          },
          "minItems": 1,
          "uniqueItems": true,
          "readOnly": true,
          "type": "array"
        },
        "range": {
          "$ref":
"https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
schema.json#/definitions/range_number"
        },
        "step": {
          "$ref":
"https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
schema.json#/definitions/step_number"
        }
      },
      "type": "object",
      "required": [
        "torque"
      ]
    }
  }
}
```

1.4.5 Property definition

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

Table 7 – The Property definitions of the Resource with type "rt" = "oic.r.torque".

Property name	Value type	Mandatory	Access mode	Description
torque	number	Yes	Read Only	This Resource describes the torque, which is the rotational equivalent of linear force, in

				N·m (Newton metre).
rt	array: see schema	No	Read Only	The Resource Type.
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	

1.4.6 CRUDN behaviour

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

Table 8 – The CRUDN operations of the Resource with type "rt" = "oic.r.torque".

Create	Read	Update	Delete	Notify
	get			observe