PUCC Metadata Specification -

IEEE11073 Devices

(Version 1.0 - March 22, 2012)

Intellectual Property Notice

Table of Content

1. Introduction

This document specifies IEEE11073 Device metadata.

2. Terminology

2.1. Definition

The following terms are defined in PUCC Device Discovery and Service Invocation Protocol Specification.

- Service;

- Device;

The template for devices and services are defined by "PUCC Device and Service Metadata Template".

2.2. Abbreviation

PUCC Peer-to-Peer Universal Computing Consortium

3. Reference

[PUCC] “Peer-to-Peer Universal Computing Consortium”,
URL: http://www.pucc.jp/

[XML] “Extensible Markup Language (XML) 1.0 (Second Edition) ”, W3C Recommendation 6 October 2000, T. Bray et al. URL: http://www.w3.org/TR/2000/REC-xml-20001006

4. Goals and Requirements

4.1. Goals

The goal of this document is:

Specify IEEE11073 Device metadata.

4.2. Requirements

4.2.1. Generality

The metadata description must be independent of particular manufacture.

5. Baseline of PUCC IEEE11073 Device Metadata specification

The baseline of PUCC IEEE11073 Device Metadata specification is described as follows,

(1) PUCC IEEE11073 Device Metadata SHOULD be defined for each health care devices specified by IEEE11073.

(2) A static property specified in IEEE11073MDS (Medical Device System) which can be mapped to Specification element in PUCC Device Metadata SHOULD be defined using Specification element in PUCC IEEE11073 Device Metadata

(3) A proprietary static property specified in IEEE11073MDS SHOULD be specified as a PUCC IEEE11073 Device state variable.

(4) A measured value specified in IEEE11073 Device Specification SHOULD be specified as a PUCC IEEE11073 Device metadata state variable.

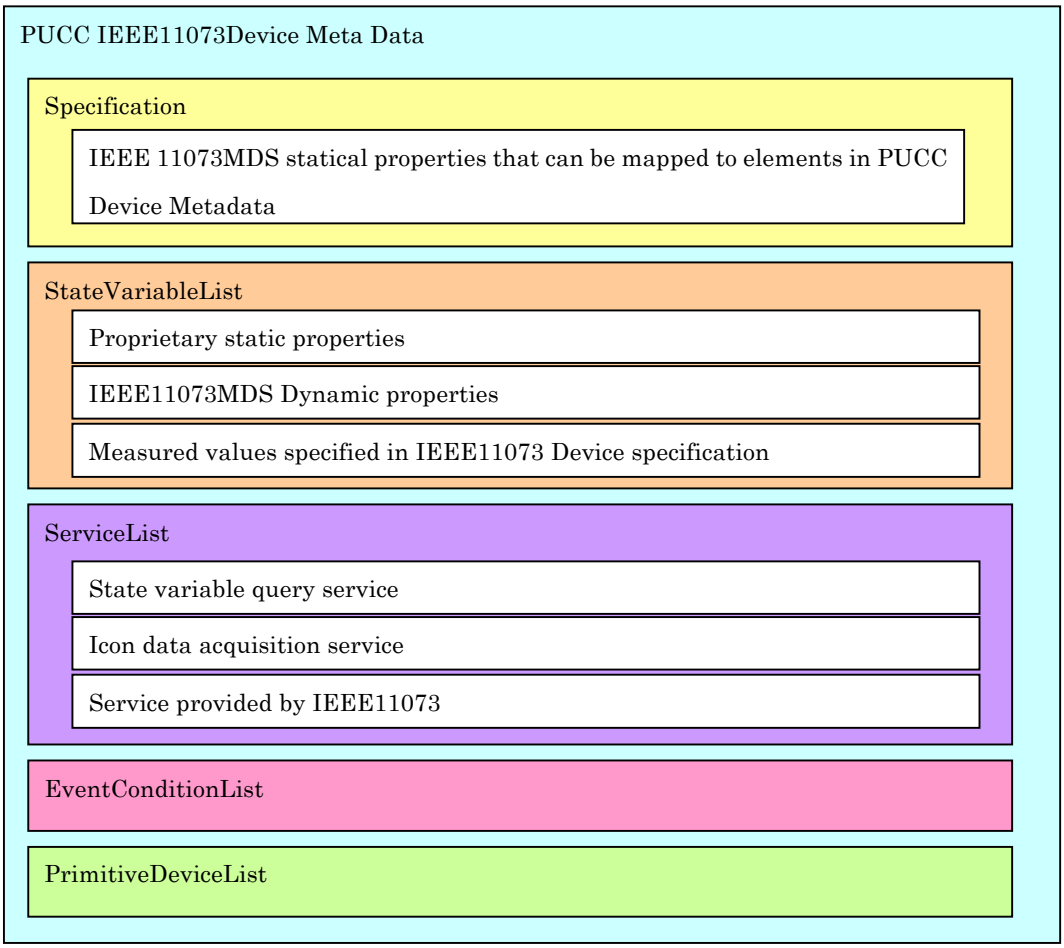
(5) The “accuracy” property of a measured value specified in IEEE11073 Device Specification would be described as the “accuracy” property value of PUCC Device state variable.

(6) Unit of measured value specified in IEEE 11073 Device Specification would be described as the “unit” property value of state variables.

(7) PUCC IEEE11073 Device Metadata provide services descrbed below,

- State variable query service
- Icon data acquisition service
- Time setting service by IEEE11073-104XX agent

Figure 5-1 shows the PUCC IEEE11073 Device Metadata data model.



※MDS・・・(Medical Device System)

Figure 5-1 PUCC IEEE11073 Device Metadata data model

6. Weighing Scales Device

In this section, the Weighing Scales device Meta Data is specified.

6.1. Device Model

The device model of a Weighing Scales device is shown below,

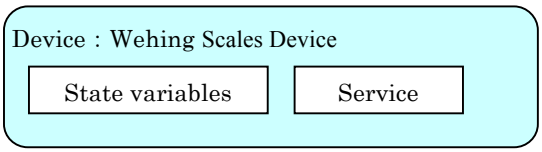


Figure 6.1-1. Device Model of a Scales device

6.2. Device Type

The Device Type ID (URL form) of a Weighing Scales device is shown below,

http://www.pucc.jp/2012/03/Device/IEEE11073/WeighingScale

6.3. State Variables

The state varibales of a Weighing Scales device is shown in the following table.

Table 6.3-1: State variables of a Wighing Scales device (1/2)

	State Variable Name	Description	Data Type	Event
1	ProductionSpec	List of device manufacturer's informationation	array	No
2	ProdSpecEntry	Device manufacture information	struct	No
3	SpecType	Information Type. Enable values are as follows,, "unspecified" "part-number" "hw-revision" "sw-revision" "fw-revision" "protocol-revision" "prod-spec-gmdn"	string	No
4	ComponentID	Component ID	integer	No
5	ProdSpec	Manufacture information	integer	No
6	Version	Device Version. In the case of IEEE11073-10415, value SHOULD be "1"be "1"	integer	No
7	DateAndTime	Current date and time value indicated by a devicedevice	dateTime	No
8	PersonId	User's personal ID	integer	Yes
9	MeasurementTime	Last measurement time provided by a device	dateTime	Yes
10	Weight	Weight Value. "unit" property value SHOULD be either "kg" or "lb". "accuracy" property MAY be used for specifying the maximum deviation between measurement value and real weight. Property value is described in float type.	float	Yes

Table 6.3-2: State variables of a scales device (2/2)

	State Variable Name	Description	Data Type	Event
11	Height	Height. "unit " property value SHOULD be either "cm" or "inch". "accuracy" property MAY be used for specifying the maximum deviation between measured and real values. "accuracy" property SHOULD be specified in float data type.	float	Yes
12	BMI	BMI. "unit " property value SHOULD be "kg/m^2". "accuracy" property MAY be used for specifying the maximum deviation between measured and real values. "accuracy" property SHOULD be specified in float data type.	float	Yes

6.4. Service

Weighing Scales device's services are shown in the following table,

Table 6.4-1: Weighing Scales device's service

	Service	Description
1	QueryStateVariable	Query Weighing Scales device's State Variables.
2	SetTime	Set time on a Weighing Scales device.
3	GetIcon	Get Icon image of Weighing Scales device.

The followings are each service' s description.

6.4.1. QueryStateVariable

(1) Description

Query Weighing Scales device's State variables.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/WeighingScale/Service/QueryStateVariable

(3) Input parameters

Table 6.4.1-1: QueryStateVariable Service Input parameters

	Parameter	State Variables	Description
1	ProductionSpec	ProductionSpec	Values SHOULD NOT specified for query.
2	ProdSpecEntry	ProdSpecEntry	
3	SpecType	SpecType	
4	ComponentId	ComponentId	
5	ProdSpec	ProdSpec	
6	Version	Version	
7	DateAndTime	DateAndTime	
8	PersonId	PersonId	
9	MeasurementTime	MeasurementTime	
10	Weight	Weight	
11	Height	Height	
12	BMI	BMI	

(4) Output parameters

Table 6.4.1-2: QueryStateVariable Service Output parameters

	Parameter	State Variables	Description
1	ProductionSpec	ProductionSpec	Value of the specified parameter as input SHOULD be included in output.
2	ProdSpecEntry	ProdSpecEntry	
3	SpecType	SpecType	
4	ComponentId	ComponentId	
5	ProdSpec	ProdSpec	
6	Version	Version	
7	DateAndTime	DateAndTime	
8	PersonId	PersonId	
9	MeasurementTime	MeasurementTime	
10	Weight	Weight	
11	Height	Height	
12	BMI	BMI	

6.4.2. SetTime

(1) Description

Set time on a device.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/WeighingScale/Service/SetTime

(3) Input parameter

Table 6.4.2-1: SetTime Service Input parameters

	Parameter	State Variables	Description
1	dateAndTime	DateAndTime	Set time on a Weighing Scales device.

(4) Output parameters

None

6.4.3. GetIcon

(1) Description

Obtain an icon image data of a device.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/WeighingScale/Service/GetIcon

(3) Input parameters

Table 6.4.3-1: GetIcon Service Input parameters

	Parameter	State Variables	Data Type	Description
1	url	-	string	Specify URL of Icon data.

(4) Output parameters

Table 6.4.3-2: GetIcon Service Output parameters

	Parameter	State Variables	Data Type	Description
1	mimeType	-	string	Specify MIME media type of the icon data.icon data.
2	base64Data	-	base64Binary	Set the icon data encode by BASE 64.

6.5. Meta Data

6.5.1. Device Meta Data

The weighing Scales device Meta Data Template is shown in the followings.

Descriptions in Red Italic Character show values related to each Scales devices.

```
<?xml version="1.0"?>
<Device  type="http://www.pucc.jp/2012/03/Device/IEEE11073/WeighingScale"
          id="global unique ID for this device"  name="short user-friendly title">
  <Specification>
    <URLBase>base URL for all relative URLs</URLBase>
    <Manufacturer>manufacturer name</Manufacturer>
    <ManufacturerURL>URL to manufacturer site</ManufacturerURL>
    <ManufactureDate>date of manufacture</ManufactureDate>
    <ModelDescription>long user-friendly title</ModelDescription>
    <ModelName>model name</ModelName>
    <ModelNumber>model number</ModelNumber>
    <ModelURL>URL to model site</ModelURL>
    <SerialNumber>manufacturer's serial number</SerialNumber>
    <UDN>uuid:UUID</UDN>
    <UPC>Universal Product Code</UPC>
    <IconList>
      <Icon>
        <Mimetype>image/format</Mimetype>
        <Width>horizontal pixels</Width>
        <Height>vertical pixels</Height>
        <Depth>color depth</Depth>
        <Url>URL to icon</Url>
      </Icon>
      XML to declare other icons, if any, go here
    </IconList>
  </Specification>
  <StateVariableList>
    <StateVariable  name="ProductionSpec"  datatype="array"  sendEvents="no">
     <StateVariable  name="ProdSpecEntry"  datatype="struct"  sendEvents="no">
      <StateVariable  name="SpecType"  datatype="string"  sendEvents="no"/>
      <StateVariable  name="ComponentId"  datatype="string"  sendEvents="no"/>
      <StateVariable  name="ProdSpec"  datatype="string"  sendEvents="no"/>
     </StateVariable>
    </StateVariable>
    <StateVariable  name="Version"  datatype="integer"  sendEvents="no"/>
    <StateVariable  name="DateAndTime"  datatype="dateTime"  sendEvents="no"/>
    <StateVariable  name="PersonId"  datatype="integer"  sendEvents="yes"/>
    <StateVariable  name="MeasurementTime"  datatype="dateTime"  sendEvents="yes"/>
    <StateVariable  name="Weight"  datatype="float"  unit="kg" sendEvents="yes"/>
```

```
    <StateVariable   name="Height"   datatype="float" unit="cm" sendEvents="yes"/>
    <StateVariable   name="BMI"   datatype="float" unit="kg/m2" sendEvents="yes"/>
  </StateVariableList>
  <ServiceList>
    <Service   name="QueryStateVariable"
        type="http://www.pucc.jp/2012/03/Device/IEEE11073/WeighingScale/Service/QueryStateVariable"/>
    <Service   name="SetTime"
        type="http://www.pucc.jp/2012/03/Device/IEEE11073/WeighingScale/Service/SetTime"/>
    <Service   name="GetIcon"
        type="http://www.pucc.jp/2012/03/Device/IEEE11073/WeighingScale/Service/GetIcon"/>
  </ServiceList>
  <PrimitiveDeviceList/>
  <EventConditionList/>
</Device>
```

6.5.2. Service Meta Data

The Service Meta Data Template of Weighing Scales device is shown in the followings.

(1)QueryStateVariable Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon"
     type="http://www.pucc.jp/2012/03/Device/IEEE11073/WeighingScale/Service/QueryStateVariable">
  <InputParameterList>
    <Parameter   name="ProductionSpec"   relatedStateVariable="ProductionSpec">
      <Parameter   name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
        <Parameter   name="SpecType" relatedStateVariable="SpecType"/>
        <Parameter   name="ComponentId" relatedStateVariable="ComponentId"/>
        <Parameter   name="ProdSpec"/>
      </Parameter>
    </Parameter>
    <Parameter name="Version" relatedStateVariable ="Version"/>
    <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
    <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
    <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
    <Parameter name="Weight" relatedStateVariable ="Weight"/>
    <Parameter name="Height" relatedStateVariable="Height"/>
    <Parameter name="BMI" relatedStateVariable="BMI"/>
  </InputParameterList>
  <OutputParameterList>
    <Parameter   name="ProductionSpec"   relatedStateVariable="ProductionSpec">
      <Parameter   name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
        <Parameter   name="SpecType" relatedStateVariable="SpecType"/>
```

```
        <Parameter    name="ComponentId" relatedStateVariable="ComponentId"/>
        <Parameter    name="ProdSpec"/>
       </Parameter>
     </Parameter>
     <Parameter name="Version" relatedStateVariable ="Version"/>
     <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
     <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
     <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
     <Parameter name="Weight" relatedStateVariable ="Weight"/>
     <Parameter name="Height" relatedStateVariable="Height"/>
     <Parameter name="BMI" relatedStateVariable="BMI"/>
  </OutputParameterList>
</Service>
```

(2)SetTime Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon"
      type="http://www.pucc.jp/2012/03/Device/IEEE11073/WeighingScale/Service/SetTime">
  <InputParameterList>
     <Parameter name="dateAndTime" relatedStateVariable="DateAndTime"/>
  </InputParameterList>
  <OutputParameterList/>
</Service>
```

(3)GetIcon Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon"
      type="http://www.pucc.jp/2012/03/Device/IEEE11073/WeighingScale/Service/GetIcon">
  <InputParameterList>
     <Parameter name="url" datatype="string"/>
  </InputParameterList>
  <OutputParameterList>
     <Parameter name="mimeType" datatype="string"/>
     <Parameter name="base64Data" datatype="base64Binary"/>
  </OutputParameterList>
</Service>
```

7. Thermometer Device

In this section, Thermometer device Meta Data is specified.

7.1. Device Model

The device model of a thermometer device is shown below,

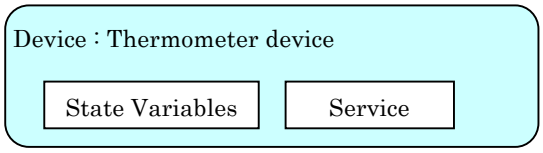


Figure 7.1-1. Device Model of a Thermometer Device

7.2. Device Type

The Device Type ID (URL form) of a Thermometer Device is shown below,

http://www.pucc.jp/2012/03/Device/IEEE11073/Thermometer

7.3. State Variables

The state varibales of a Thermometer device is shown in the following table.

Table7.3-1: State variables of a thermometer device (1/2)

	State Variable Name	Description	Data Type	Event
1	ProductionSpec	List of device manufacturer's informationation	array	No
2	ProdSpecEntry	Manufacture's informationmation	struct	No
3	SpecType	Information Type. Enable values are as follows, "unspecified" "part-number" "hw-revision" "sw-revision" "fw-revision" "protocol-revision" "prod-spec-gmdn"	string	No
4	ComponentID	Component ID	integer	No
5	ProdSpec	Manufacture's informationmation	integer	No
6	Version	Device Version. In the case of IEEE11073-10415, value SHOULD be "1"	integer	No
7	DateAndTime	Current date and time value indicated by a devicedevice	dateTime	No
8	PersonId	User's personal ID	integer	Yes
9	MeasurementTime	Last measurement time provided by a device	dateTime	Yes

Table7.3-2: State Variables of a thermometer device (2/2)

	State Variable Name	Description	Data Type	Event
10	Type	Measuring body part Enable values are as follows, "Axillary" "Body" "Ear" "Finger" "Intestines" "Oral" "Rectum" "Toe" "Tympanic"	string	Yes
11	BodyTemperature	Body Temperature. ”unit “ property value SHOULD be either "deg C" or "fahr". “accuracy” property MAY be used for specifying the maximum deviation between measured and real values. “accuracy” property SHOULD be specified in float data type when used.	float	Yes

7.4. Service

Thermometer device's services are shown in the following table,

Table 7.4-1: Thermometer device's services

	Service	Description
1	QueryStateVariable	Query Thermometer device's State Variables.
2	SetTime	Set time on Thermometer device.
3	GetIcon	Get Icon image of Thermometer device.

The followings are each service' s description.

7.4.1. QueryStateVariable

(1) Description

Query Thermometer device's State Variables.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/Thermometer/Service/QueryStateVariable

(3) Input parameters

Table 7.4.1-1: QueryStateVariable Service Input parameters

	Parameter	State Variables	Description
1	ProductionSpec	ProductionSpec	Values SHOULD NOT specified for query.
2	ProdSpecEntry	ProdSpecEntry	
3	SpecType	SpecType	
4	ComponentId	ComponentId	
5	ProdSpec	ProdSpec	
6	Version	Version	
7	DateAndTime	DateAndTime	
8	PersonId	PersonId	
9	MeasurementTime	MeasurementTime	
10	Type	Type	
11	BodyTemperature	BodyTemperature	

(4) Output parameters

Table 7.4.1-2: QueryStateVariable Service Output parameters

	Parameter	State Variables	Description
1	ProductionSpec	ProductionSpec	Value of the specified parameter as input SHOULD be included in output.
2	ProdSpecEntry	ProdSpecEntry	
3	SpecType	SpecType	
4	ComponentId	ComponentId	
5	ProdSpec	ProdSpec	
6	Version	Version	
7	DateAndTime	DateAndTime	
8	PersonId	PersonId	
9	MeasurementTime	MeasurementTime	
10	Type	Type	
11	BodyTemperature	BodyTemperature	

7.4.2. SetTime

(1) Description

Set time on a device.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/Thermometer/Service/SetTime

(3) Input parameters

Table 7.4.2-1: SetTime Service Input parameters

	Parameter	State Variables	Description
1	dateAndTime	DateAndTime	Set time on a Thermometer device.

(4) Output parameters

None.

7.4.3. GetIcon

(1) Description

Obtain an icon image data of a device.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/Thermometer/Service/GetIcon

(3) Input parameters

Table 7.4.3-1: GetIcon Service Input parameters

	Parameter	State Variables	Data Type	Description
1	url	-	string	Specify URL of Icon data.

(4) Output parameters

Table 7.4.3-2: GetIcon Service Output parameters

	Parameter	State Variables	Data Type	Description
1	mimeType	-	string	Specify MIME media type of the icon data.icon data.
2	base64Data	-	base64Binary	Set the icon data encode by BASE 64.

7.5. Meta Data

7.5.1. Device Meta Data

The Thermometer device Meta Data Template is shown in the followings.

Descriptions in Red Italic Character : show values related to each Thermometer devices.

```
<?xml version="1.0"?>
<Device  type="http://www.pucc.jp/2012/03/Device/IEEE11073/Thermometer"
          id="global unique ID for this device"  name="short user-friendly title">
  <Specification>
    <URLBase>base URL for all relative URLs</URLBase>
    <Manufacturer>manufacturer name</Manufacturer>
    <ManufacturerURL>URL to manufacturer site</ManufacturerURL>
    <ManufactureDate>date of manufacture</ManufactureDate>
    <ModelDescription>long user-friendly title</ModelDescription>
    <ModelName>model name</ModelName>
    <ModelNumber>model number</ModelNumber>
    <ModelURL>URL to model site</ModelURL>
    <SerialNumber>manufacturer's serial number</SerialNumber>
    <UDN>uuid:UUID</UDN>
    <UPC>Universal Product Code</UPC>
    <IconList>
      <Icon>
        <Mimetype>image/format</Mimetype>
        <Width>horizontal pixels</Width>
        <Height>vertical pixels</Height>
        <Depth>color depth</Depth>
        <Url>URL to icon</Url>
      </Icon>
      XML to declare other icons, if any, go here
    </IconList>
  </Specification>
  <StateVariableList>
    <StateVariable  name="ProductionSpec"  datatype="array"  sendEvents="no">
     <StateVariable  name="ProdSpecEntry"  datatype="struct"  sendEvents="no">
      <StateVariable  name="SpecType"  datatype="string"  sendEvents="no"/>
      <StateVariable  name="ComponentId"  datatype="string"  sendEvents="no"/>
      <StateVariable  name="ProdSpec"  datatype="string"  sendEvents="no"/>
     </StateVariable>
    </StateVariable>
    <StateVariable  name="Version"  datatype="integer"  sendEvents="no"/>
    <StateVariable  name="DateAndTime"  datatype="dateTime"  sendEvents="no"/>
    <StateVariable  name="PersonId"  datatype="integer"  sendEvents="yes"/>
    <StateVariable  name="MeasurementTime"  datatype="dateTime"  sendEvents="yes"/>
    <StateVariable  name="Type"  datatype="string" sendEvents="yes"/>
```

```
    <StateVariable    name="BodyTemperature"    datatype="float" unit="degC" sendEvents="yes"/>
  </StateVariableList>
  <ServiceList>
    <Service    name="QueryStateVariable"
        type="http://www.pucc.jp/2012/03/Device/IEEE11073/Thermometer/Service/QueryStateVariable"/>
    <Service    name="SetTime"
        type="http://www.pucc.jp/2012/03/Device/IEEE11073/Thermometer/Service/SetTime"/>
    <Service    name="GetIcon"
        type="http://www.pucc.jp/2012/03/Device/IEEE11073/Thermometer/Service/GetIcon"/>
  </ServiceList>
  <PrimitiveDeviceList/>
  <EventConditionList/>
</Device>
```

7.5.2. Service Meta Data

The Service Meta Data Template of Thermometer device is shown in the followings.

(1)QueryStateVariable Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon"
    type="http://www.pucc.jp/2012/03/Device/IEEE11073/Thermometer/Service/QueryStateVariable">
  <InputParameterList>
    <Parameter    name="ProductionSpec"    datatype="array"    sendEvents="no">
      <Parameter    name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
        <Parameter    name="SpecType" relatedStateVariable="SpecType"/>
        <Parameter    name="ComponentId" relatedStateVariable="ComponentId"/>
        <Parameter    name="ProdSpec"/>
      </Parameter>
    </Parameter>
    <Parameter name="Version" relatedStateVariable ="Version"/>
    <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
    <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
    <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
    <Parameter name="Type" relatedStateVariable =" Type "/>
    <Parameter name="BodyTemperature" relatedStateVariable="BodyTemperature"/>
  </InputParameterList>
  <OutputParameterList>
    <Parameter    name="ProductionSpec"    datatype="array"    sendEvents="no">
      <Parameter    name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
        <Parameter    name="SpecType" relatedStateVariable="SpecType"/>
        <Parameter    name="ComponentId" relatedStateVariable="ComponentId"/>
        <Parameter    name="ProdSpec"/>
      </Parameter>
```

```
    </Parameter>
    <Parameter name="Version" relatedStateVariable ="Version"/>
    <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
    <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
    <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
    <Parameter name="Type" relatedStateVariable ="Type"/>
    <Parameter name="BodyTemperature" relatedStateVariable="BodyTemperature"/>
  </OutputParameterList>
</Service>
```

(2)SetTime Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon"
    type="http://www.pucc.jp/2012/03/Device/IEEE11073/Thermometer/Service/SetTime">
  <InputParameterList>
    <Parameter name="dateAndTime" relatedStateVariable="DateAndTime"/>
  </InputParameterList>
  <OutputParameterList/>
</Service>
```

(3)GetIcon Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon"
    type="http://www.pucc.jp/2012/03/Device/IEEE11073/Thermometer/Service/GetIcon">
  <InputParameterList>
    <Parameter name="url" datatype="string"/>
  </InputParameterList>
  <OutputParameterList>
    <Parameter name="mimeType" datatype="string"/>
    <Parameter name="base64Data" datatype="base64Binary"/>
  </OutputParameterList>
</Service>
```

8. Blood Pressure Monitor Device

In this section, the blood pressure monitor Device Meta Data is specified.

8.1. Device Model

The device model of a Blood Pressure Monitor device is shown below,

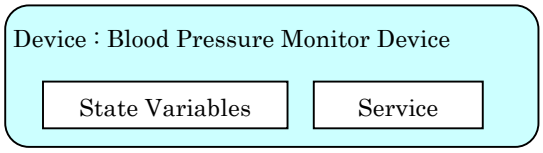


Figure 8.1-1. Device Model of a Blood Pressure Monitor Device

8.2. Device Type

The Device Type ID (URL form) of a blood pressure monitor device is shown below,

http://www.pucc.jp/2012/03/Device/IEEE11073/BloodPressureMonitor

8.3. State Variables

The state varibales of a Blood Pressure Monitor device is shown in the following table.

Table 8.3-1: State Variables of a Blood Pressure Monitor (1/2)

	State Variable Name	Description	Data Type	Event
1	ProductionSpec	List of device manufacturer's informationation	array	No
2	ProdSpecEntry	Manufacture's informationmationManufacture's information	struct	No
3	SpecType	Information Type. Enable values are as follows, "unspecified" "part-number" "hw-revision" "sw-revision" "fw-revision" "protocol-revision" "prod-spec-gmdn"	string	No
4	ComponentID	Component ID	integer	No
5	ProdSpec	Manufacture's informationmation	integer	No
6	Version	Device Version. In the case of IEEE11073-10415, value SHOULD be "1"	integer	No
7	DateAndTime	Current date and time value indicated by a devicedevice	dateTime	No
8	PersonId	User's personal ID	integer	Yes
9	MeasurementTime	Last measurement time provided by a device	dateTime	Yes
10	SystolicPressure	Systolic Pressure "unit" property value SHOULD be either "mmHG" or "kPa". "accuracy" property MAY be used for specifying the maximum deviation between measurement value and real value. Property value is described in float type.	float	Yes

Table 8.3-2: State Variables of a Blood Pressure Monitor (2/2)

	State Variable Name	Description	Data Type	Event
11	DiastolicPressure	Diatolic Pressure "unit" property value SHOULD be either "mmHG" or "kPa". "accuracy" property MAY be used for specifying the maximum deviation between measurement value and real value. Property value is described in float type.	float	Yes
12	MeanArterialPressure	Mean Arterial Pressure "unit" property value SHOULD be either "mmHG" or "kPa". "accuracy" property MAY be used for specifying the maximum deviation between measurement value and real value. Property value is described in float type.	float	Yes
13	PulseRate	Pulse Rate "unit" property value SHOULD be "BPM". "accuracy" property MAY be used for specifying the maximum deviation between measurement value and real value. Property value is described in float type.	float	Yes

8.4. Service

Blood Pressure Monitor device's services are shown in the following table.

Table 8.4-1: Blood Pressure Monitor device's services

	Service	Description
1	QueryStateVariable	Query Blood Pressure Monitor device's State Variables.
2	SetTime	Set time on a Blood Pressure Monitor device.
3	GetIcon	Get Icon image of Blood Pressure Monitor device.

The followings are each service' s description.

8.4.1. QueryStateVariable

(1) Description

Query Blood Pressure Monitor device's State Variables.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/BloodPressureMonitor/Service/QueryStateVariable

(3) Input parameters

Table 8.4.1-1: QueryStateVariable Service Input parameters

	Parameter	State Variables	Description
1	ProductionSpec	ProductionSpec	Values SHOULD NOT specified for query.
2	ProdSpecEntry	ProdSpecEntry	
3	SpecType	SpecType	
4	ComponentId	ComponentId	
5	ProdSpec	ProdSpec	
6	Version	Version	
7	DateAndTime	DateAndTime	
8	PersonId	PersonId	
9	MeasurementTime	MeasurementTime	
10	SystolicPressure	SystolicPressure	
11	DiastolicPressure	DiastolicPressure	
12	MeanArterialPressure	MeanArterialPressure	
13	PulseRate	PulseRate	

(4) Output parameters

Table 8.4.1-2: QueryStateVariable Service Output parameters

	Parameter	State Variables	Description
1	ProductionSpec	ProductionSpec	Value of the specified parameter as input SHOULD be included in output.
2	ProdSpecEntry	ProdSpecEntry	
3	SpecType	SpecType	
4	ComponentId	ComponentId	
5	ProdSpec	ProdSpec	
6	Version	Version	
7	DateAndTime	DateAndTime	
8	PersonId	PersonId	
9	MeasurementTime	MeasurementTime	
10	SystolicPressure	SystolicPressure	
11	DiastolicPressure	DiastolicPressure	
12	MeanArterialPressure	MeanArterialPressure	
13	PulseRate	PulseRate	

8.4.2. SetTime

(1) Description

Set time on a device.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/BloodPressureMonitor/Service/SetTime

(3) Input parameters

Table 8.4.2-1: SetTime Service Input parameters

	Parameter	State Variables	Description
1	dateAndTime	DateAndTime	Set time on a Blood Pressure Monitor device.

(4) Output parameters

None.

8.4.3. GetIcon

(1) Description

Obtain an icon image data of a device.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/BloodPressureMonitor/Service/GetIcon

(3) Input parameters

Table 8.4.3-1: GetIcon Service Input parameters

	Parameter	State Variables	Data Type	Description
1	url	-	string	Specify URL of Icon data.

(4) Output parameters

Table 8.4.3-2: GetIcon Service Output parameters

	Parameter	State Variables	Data Type	Description
1	mimeType	-	string	Specify MIME media type of the icon data.icon data.
2	base64Data	-	base64Binary	Set the icon data encode by BASE 64.

8.5. Meta Data

8.5.1. Device Meta Data

The blood pressure monitor device Meta Data Template is shown in the followings.

Descriptions in Red Italic Character : show values related to each blood pressure monitor devices.

```
<?xml version="1.0"?>
<Device  type="http://www.pucc.jp/2012/03/Device/IEEE11073/BloodPressureMonitor"
          id="global unique ID for this device"  name="short user-friendly title">
  <Specification>
    <URLBase>base URL for all relative URLs</URLBase>
    <Manufacturer>manufacturer name</Manufacturer>
    <ManufacturerURL>URL to manufacturer site</ManufacturerURL>
    <ManufactureDate>date of manufacture</ManufactureDate>
    <ModelDescription>long user-friendly title</ModelDescription>
    <ModelName>model name</ModelName>
    <ModelNumber>model number</ModelNumber>
    <ModelURL>URL to model site</ModelURL>
    <SerialNumber>manufacturer's serial number</SerialNumber>
    <UDN>uuid:UUID</UDN>
    <UPC>Universal Product Code</UPC>
    <IconList>
      <Icon>
        <Mimetype>image/format</Mimetype>
        <Width>horizontal pixels</Width>
        <Height>vertical pixels</Height>
        <Depth>color depth</Depth>
        <Url>URL to icon</Url>
      </Icon>
      XML to declare other icons, if any, go here
    </IconList>
  </Specification>
  <StateVariableList>
    <StateVariable  name="ProductionSpec"  datatype="array"  sendEvents="no">
     <StateVariable  name="ProdSpecEntry"  datatype="struct"  sendEvents="no">
      <StateVariable  name="SpecType"  datatype="string"  sendEvents="no"/>
      <StateVariable  name="ComponentId"  datatype="string"  sendEvents="no"/>
      <StateVariable  name="ProdSpec"  datatype="string"  sendEvents="no"/>
     </StateVariable>
    </StateVariable>
    <StateVariable  name="Version"  datatype="integer"  sendEvents="no"/>
    <StateVariable  name="DateAndTime"  datatype="dateTime"  sendEvents="no"/>
    <StateVariable  name="PersonId"  datatype="integer"  sendEvents="yes"/>
    <StateVariable  name="MeasurementTime"  datatype="dateTime"  sendEvents="yes"/>
    <StateVariable  name="SystolicPressure"  datatype="float" unit="mmHg" sendEvents="yes"/>
```

```
    <StateVariable   name="DiastolicPressure"   datatype="float" unit="mmHg" sendEvents="yes"/>
    <StateVariable   name="MeanArterialPressure"   datatype="float" unit="mmHg" sendEvents="yes"/>
    <StateVariable   name="PulseRate"   datatype="float" unit="BPM" sendEvents="yes"/>
  </StateVariableList>
  <ServiceList>
    <Service   name="QueryStateVariable"type="http://www.pucc.jp/2012/03/Device/IEEE11073/
        BloodPressureMonitor/Service/ QueryStateVariable"/>
    <Service   name="SetTime"
        type="http://www.pucc.jp/2012/03/Device/IEEE11073/BloodPressureMonitor/Service/SetTime"/>
    <Service   name="GetIcon"
        type="http://www.pucc.jp/2012/03/Device/IEEE11073/BloodPressureMonitor/Service/GetIcon"/>
  </ServiceList>
  <PrimitiveDeviceList/>
</Device>
```

8.5.2. Service Meta Data

The Service Meta Data Template of blood pressure monitor is shown in the followings.

(1)QueryStateVariable Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon"
      type="http://www.pucc.jp/2012/03/Device/IEEE11073/BloodPressureMonitor/Service/QueryStateVariable">
   <InputParameterList>
      <Parameter    name="ProductionSpec"    datatype="array"    sendEvents="no">
        <Parameter    name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
          <Parameter    name="SpecType" relatedStateVariable="SpecType"/>
          <Parameter    name="ComponentId" relatedStateVariable="ComponentId"/>
          <Parameter    name="ProdSpec"/>
        </Parameter>
      </Parameter>
      <Parameter name="Version" relatedStateVariable ="Version"/>
      <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
      <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
      <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
      <Parameter name="SystolicPressure" relatedStateVariable ="SystolicPressure"/>
      <Parameter name="DiastolicPressure" relatedStateVariable="DiastolicPressure"/>
      <Parameter name="MeanArterialPressure" relatedStateVariable="MeanArterialPressure"/>
      <Parameter name="PulseRate" relatedStateVariable="PulseRate"/>
   </InputParameterList>
   <OutputParameterList>
      <Parameter    name="ProductionSpec"    datatype="array"    sendEvents="no">
        <Parameter    name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
          <Parameter    name="SpecType" relatedStateVariable="SpecType"/>
          <Parameter    name="ComponentId" relatedStateVariable="ComponentId"/>
          <Parameter    name="ProdSpec"/>
        </Parameter>
      </Parameter>
      <Parameter name="Version" relatedStateVariable ="Version"/>
      <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
      <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
      <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
      <Parameter name="SystolicPressure" relatedStateVariable ="SystolicPressure"/>
      <Parameter name="DiastolicPressure" relatedStateVariable="DiastolicPressure"/>
      <Parameter name="MeanArterialPressure" relatedStateVariable="MeanArterialPressure"/>
      <Parameter name="PulseRate" relatedStateVariable="PulseRate"/>
   </OutputParameterList>
</Service>
```

(2)SetTime Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon"
      type="http://www.pucc.jp/2012/03/Device/IEEE11073/BloodPressureMonitor/Service/SetTime">
   <InputParameterList>
      <Parameter name="dateAndTime" relatedStateVariable="DateAndTime"/>
   </InputParameterList>
   <OutputParameterList/>
</Service>
```

(3)GetIcon Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon"
      type="http://www.pucc.jp/2012/03/Device/IEEE11073/BloodPressureMonitor/Service/GetIcon">
   <InputParameterList>
      <Parameter name="url" datatype="string"/>
   </InputParameterList>
   <OutputParameterList>
      <Parameter name="mimeType" datatype="string"/>
      <Parameter name="base64Data" datatype="base64Binary"/>
   </OutputParameterList>
</Service>
```

9. Cardiovascular Fitness and Activity Monitor Device

In this section, the Cardiovascular Fitness and Activity Monitor device Meta Data is specified.

9.1. Device Model

The device model of a Cardiovascular Fitness and Activity Monitor device is shown below,

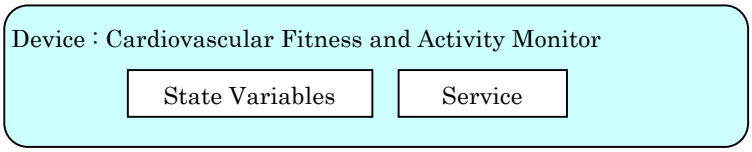


Figure 9.1-1. Device Model of a Cardiovascular Fitness and Activity Monitor device

9.2. Device Type

The Device Type ID (URL form) of a Cardiovascular Fitness and Activity Monitor device is shown below,

http://www.pucc.jp/2012/03/Device/IEEE11073/CardiovascularFitnessAndActivityMonitor

9.3. State Variables

The state varibales of a Cardiovascular Fitness and Activity Monitor device is shown in the following table.

Table 9.3-1: State Variables of a Cardiovascular Fitness and Activity Monitor (1/8)

	State Variable Name	Description	Data Type	Event
1	ProductionSpec	List of device manufacturer's informationation	array	No
2	ProdSpecEntry	Manufacture's informationmation	struct	No
3	SpecType	Information Type. Enable values are as follows, "unspecified" "part-number" "hw-revision" "sw-revision" "fw-revision" "protocol-revision" "prod-spec-gmdn"	string	No
4	ComponentID	Component ID	integer	No
5	ProdSpec	Manufacture's informationmation	integer	No
6	Version	Device Version. In the case of IEEE11073-10415, value SHOULD be "1"	integer	No
7	DateAndTime	Current date and time value indicated by a devicedevice	dateTime	No
8	PersonId	User's personal ID	integer	Yes
9	MeasurementTime	Last measurement time provided by a device	dateTime	Yes
10	Session	Session	struct	Yes
11	SubSessionList	List of Sub Session	array	No
12	SubSession	Sub Sessio. Elemets of Sub Session are same to Elements of Session (except SubSession List).	struct	No

Table 9.3-2: State Variables of a Cardiovascular Fitness and Activity Monitor (2/8)

	State Variable Name	Description	Data Type	Event
13	StartTime	Starting time of the training activity.	dateTime	No
14	ActivityType	Type of Activity Enable values are as follows, "Unknown" "Multiple" "Monitor" "Ski" "Run" "Bike" "Stair" "Row" "Home" "Work" "Walk".	string	No
15	Duration	Duration of training activity	integer	No
16	MaxUserHeartRate	User's Max Heart (beat) Rate. "unit" property value SHOULD be "BPM". "accuracy" property MAY be used for specifying the maximum deviation between measurement value and real value. Property value is described in float type.	float	No
17	HeartRate	Heart Rate "unit" property value SHOULD be "BPM". "accuracy" property MAY be used for specifying the maximum deviation between measurement value and real value. Property value is described in float type.	float	No

Table 9.3-3: State Variables of a Cardiovascular Fitness and Activity Monitor (3/8)

	State Variable Name	Description	Data Type	Event
18	Intensity	Strength of the target activity. This property is used supplementaly with the target activit's program identifier for representing the target activity feature. Eg. Slow run: 30%, adequate speed run: 50%, and fast run: 80%. "unit" property value SHOULD be "%". "accuracy" property MAY be used for specifying the maximum deviation between measurement value and real value. Property value is described in float type.	float	No
19	Latitude	Latitude. "unit" property value SHOULD be "%". "accuracy" property MAY be used for specifying the maximum deviation between measurement value and real value. Property value is described in float type.	float	No
20	Longitude	Longitude. "unit" property value SHOULD be "%". "accuracy" property MAY be used for specifying the maximum deviation between measurement value and real value. Property value is described in float type.	float	No
21	Speed	Speed. "unit" property value SHOULD be one of the followings, "m/s" "ft/s" "inch/s" "step/s". "accuracy" property MAY be used for specifying the maximum deviation between measurement value and real value. Property value is described in float type.	float	No

Table 9.3-4: State Variables of a Cardiovascular Fitness and Activity Monitor (4/8)

	State Variable Name	Description	Data Type	Event
22	Slope	Number of slopes. “unit” property MAY not specify. “accuracy” property MAY be used for specifying the maximum deviation between measurement value and real value. Property value is described in float type.	float	No
23	AltitudeLoss	Altitude loss. “unit” property value SHOULD be either “m” or “ft”. “accuracy” property MAY be used for specifying the maximum deviation between measurement value and real value. Property value is described in float type.	float	No
24	AltitudeGain	Altitude Gain. “unit” property value SHOULD be either “m” or “ft”. “accuracy” property MAY be used for specifying the maximum deviation between measurement value and real value. Property value is described in float type.	float	No
25	Distance	Moving distance. “unit” property value SHOULD be one of the followings, "m" "ft" "step". “accuracy” property MAY be used for specifying the maximum deviation between measurement value and real value. Property value is described in float type.	float	No

26		Resistance	Resistance. “unit” property MAY not specify. “accuracy” property MAY be used for specifying the maximum deviation between measurement value and real value. Property value is described in float type.	float	No

Table 9.3-5: State Variables of a Cardiovascular Fitness and Activity Monitor (5/8)

	State Variable Name	Description	Data Type	Event
27	Incline	Incline “unit” property value SHOULD be either “%” or “degree”. “accuracy” property MAY be used for specifying the maximum deviation between measurement value and real value. Property value is described in float type.	float	No
28	Power	Power of user’s activity. “unit” property value SHOULD be “W”. “accuracy” property MAY be used for specifying the maximum deviation between measurement value and real value. Property value is described in float type.	float	No
29	ProgramIdentifier	String for identifying target exersice program.	string	No
30	ActivityTime	Activity Style Enable values are as follows, "Ambulate" "Resting" "Motoring" "LyingDown" "Sleeping" "Physical".	string	No
31	StrideLength	Stride Length “unit” property value SHOULD be either “m” or “inch”. “accuracy” property MAY be used for specifying the maximum deviation between measurement value and real value. Property value is described in float type.	float	No

32		Height	Height “unit” property value SHOULD be either “m” or “ft”. “accuracy” property MAY be used for specifying the maximum deviation between measurement value and real value. Property value is described in float type.	float	No

Table 9.3-6: State Variables of a Cardiovascular Fitness and Activity Monitor (6/8)

	State Variable Name	Description	Data Type	Event
33	Weight	Weight. “unit” property value SHOULD be “g” or “lb”. “accuracy” property MAY be used for specifying the maximum deviation between measurement value and real value. Property value is described in float type.	float	No
34	EnergyExpanded	Consumed Energy in a constant period. “unit” property value SHOULD be either “cal” or “J”. “accuracy” property MAY be used for specifying the maximum deviation between measurement value and real value. Property value is described in float type.	float	No
35	BreathingRate	Breathing Rate. “unit” property value SHOULD be “resp/s”. “accuracy” property MAY be used for specifying the maximum deviation between measurement value and real value. Property value is described in float type.	float	No
36	CaloriesIngested	Consumed or intook Calories “unit” property value SHOULD be “cal”. “accuracy” property MAY be used for specifying the maximum deviation between measurement value and real value. Property value is described in float type.	float	No
37	Age	Age. ”unit” property value MAY not specify.	float	No

38		Cadence	Number of frequency. “unit” property value SHOULD be “rpm”. “accuracy” property MAY be used for specifying the maximum deviation between measurement value and real value. Property value is described in float type.	float	No

Table 9.3-7: State Variables of a Cardiovascular Fitness and Activity Monitor (7/8)

	State Variable Name	Description	Data Type	Event
39	Altitude	Altitude. “unit” property value SHOULD be wither “m” or “ft”. “accuracy” property MAY be used for specifying the maximum deviation between measurement value and real value. Property value is described in float type.	float	No
40	AscentTimeAndDistance	Time and distance value on ascent. “unit” property value SHOULD be one of the followings, "m" "ft" "step". “accuracy” property MAY be used for specifying the maximum deviation between measurement value and real value. Property value is described in float type.	float	No
41	DescentTimeAndDistance	Time and distance on descent. “unit” property value SHOULD be one of the followings, "m" "ft" "step". “accuracy” property MAY be used for specifying the maximum deviation between measurement value and real value. Property value is described in float type.	float	No

42		SustainedPhysActivitThreshold	Thresholding parameter to determine an activity as Substained Physical Activity. "unit" property value SHOULD be "min". "accuracy" property MAY be used for specifying the maximum deviation between measurement value and real value. Property value is described in float type.	float	No

Table 9.3-8: State Variables of a Cardiovascular Fitness and Activity Monitor (8/8)

	State Variable Name		Description	Data Type	Event
43		CarbohydrateCaloritesIngested	Calories of ingested carbohydrate. "unit" property value SHOULD be "cal". "accuracy" property MAY be used for specifying the maximum deviation between measurement value and real value. Property value is described in float type.	float	No

9.4. Service

Cardiovascular Fitness and Activity Monitor device's services are shown in the following table.

Table 9.4-1: Cardiovascular Fitness and Activity Monitor device's services

	Service	Description
1	QueryStateVariable	Query Cardiovascular Fitness and Activity Monitor device's State Variables.
2	SetTime	Set time on a Cardiovascular Fitness and Activity Monitor device.
3	GetIcon	Get Icon image of Cardiovascular Fitness and Activity Monitor device

The followings are each service's description.

9.4.1. QueryStateVariable

(1) Description

Query Cardiovascular Fitness and Activity Monitor device'e State Variables.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/CardiovascularFitnessAndActivityMonitor/Service/QueryStateVariable

(3) Input parameters

Table 9.4.1-1: QueryStateVariable Service Input parameters(1/3)

	Parameter	State Variables	Description
1	ProductionSpec	ProductionSpec	Values SHOULD NOT specified for query.
2	ProdSpecEntry	ProdSpecEntry	
3	SpecType	SpecType	
4	ComponentId	ComponentId	
5	ProdSpec	ProdSpec	
6	Version	Version	
7	DateAndTime	DateAndTime	
8	PersonId	PersonId	
9	MeasurementTime	MeasurementTime	
10	Session	Session	
11	SubSessionList	SubSessionList	
12	SubSession	SubSession	
13	StartTime	StartTime	
14	ActivityType	ActivityType	
15	Duration	Duration	
16	UserMaxHeartRate	UserMaxHeartRate	
17	HeartRate	HeartRate	
18	Intensity	Intensity	
19	Latitude	Latitude	
20	Longitude	Longitude	
21	Speed	Speed	
22	Slope	Slope	
23	AltitudeLoss	AltitudeLoss	
24	AltitudeGain	AltitudeGain	
25	Distance	Distance	
26	Resistance	Resistance	
27	Incline	Incline	
28	Power	Power	
29	ProgramIdentifier	ProgramIdentifier	
30	ActivityTime	ActivityTime	

Table 9.4.1-2: QueryStateVariable Service Input parameters (2/3)

	Parameter	State Variables	Description
31	StrideLength	StrideLength	
32	Height	Height	
33	Weight	Weight	
34	EnergyExpanded	EnergyExpanded	
35	BreathingRate	BreathingRate	
36	CaloriesIngested	CaloriesIngested	
37	Age	Age	
38	Cadence	Cadence	
39	AscentTimeAndDistance	AscentTimeAndDistance	
40	DescentTimeAndDistance	DescentTimeAndDistance	
41	Altitude	Altitude	
42	SustainedPhysActivitThresold	SustainedPhysActivitThresold	
43	CarbohydrateCaloritesIngested	CarbohydrateCaloritesIngested	
44	StartTime	StartTime	
45	ActivityType	ActivityType	
46	Duration	Duration	
47	UserMaxHeartRate	UserMaxHeartRate	
48	HeartRate	HeartRate	
49	Intensity	Intensity	
50	Latitude	Latitude	
51	Longitude	Longitude	
52	Speed	Speed	
53	Slope	Slope	
54	AltitudeLoss	AltitudeLoss	
55	AltitudeGain	AltitudeGain	
56	Distance	Distance	
57	Resistance	Resistance	
58	Incline	Incline	
59	Power	Power	
60	ProgramIdentifier	ProgramIdentifier	
61	ActivityTime	ActivityTime	
62	StrideLength	StrideLength	
63	Height	Height	
64	Weight	Weight	
65	EnergyExpanded	EnergyExpanded	
66	BreathingRate	BreathingRate	
67	CaloriesIngested	CaloriesIngested	
68	Age	Age	
69	Cadence	Cadence	
70	Altitude	Altitude	

Table 9.4.1-3 QueryStateVariable Service Input parameters(3/3)

	Parameter	State Variables	Description
71	AscentTimeAndDistance	AscentTimeAndDistance	
72	DescentTimeAndDistance	DescentTimeAndDistance	
73	SustainedPhysActivitThresold	SustainedPhysActivitThresold	
74	CarbohydrateCaloritesIngested	CarbohydrateCaloritesIngested	

(4) Output parameters

Table 9.4.1-4: QueryStateVariable Service Output parameters(1/2)

	Parameter	State Variables	Description
1	ProductionSpec	ProductionSpec	Value of the specified parameter as input SHOULD be included in output.
2	ProdSpecEntry	ProdSpecEntry	
3	SpecType	SpecType	
4	ComponentId	ComponentId	
5	ProdSpec	ProdSpec	
6	Version	Version	
7	DateAndTime	DateAndTime	
8	PersonId	PersonId	
9	MeasurementTime	MeasurementTime	
10	Session	Session	
11	SubSessionList	SubSessionList	
12	SubSession	SubSession	
13	StartTime	StartTime	
14	ActivityType	ActivityType	
15	Duration	Duration	
16	UserMaxHeartRate	UserMaxHeartRate	
17	HeartRate	HeartRate	
18	Intensity	Intensity	
19	Latitude	Latitude	
20	Longitude	Longitude	
21	Speed	Speed	
22	Slope	Slope	
23	AltitudeLoss	AltitudeLoss	
24	AltitudeGain	AltitudeGain	
25	Distance	Distance	
26	Resistance	Resistance	
27	Incline	Incline	
28	Power	Power	
29	ProgramIdentifier	ProgramIdentifier	
30	ActivityTime	ActivityTime	
31	StrideLength	StrideLength	
32	Height	Height	
33	Weight	Weight	
34	EnergyExpanded	EnergyExpanded	
35	BreathingRate	BreathingRate	
36	CaloriesIngested	CaloriesIngested	
37	Age	Age	
38	Cadence	Cadence	
39	Altitude	Altitude	
40	AscentTimeAndDistance	AscentTimeAndDistance	

Table 9.4.1-5: QueryStateVariable Service Output parameters(2/2)

	Parameter	State Variables	Description
41	DescentTimeAndDistance	DescentTimeAndDistance	
42	Altitude	Altitude	
43	SustainedPhysActivitThresold	SustainedPhysActivitThresold	
44	CarbohydrateCaloritesIngested	CarbohydrateCaloritesIngested	
45	StartTime	StartTime	
46	ActivityType	ActivityType	
47	Duration	Duration	
48	UserMaxHeartRate	UserMaxHeartRate	
49	HeartRate	HeartRate	
50	Intensity	Intensity	
51	Latitude	Latitude	
52	Longitude	Longitude	
53	Speed	Speed	
54	Slope	Slope	
55	AltitudeLoss	AltitudeLoss	
56	AltitudeGain	AltitudeGain	
57	Distance	Distance	
58	Resistance	Resistance	
59	Incline	Incline	
60	Power	Power	
61	ProgramIdentifier	ProgramIdentifier	
62	ActivityTime	ActivityTime	
63	StrideLength	StrideLength	
64	Height	Height	
65	Weight	Weight	
66	EnergyExpanded	EnergyExpanded	
67	BreathingRate	BreathingRate	
68	CaloriesIngested	CaloriesIngested	
69	Age	Age	
70	Cadence	Cadence	
71	Altitude	Altitude	
72	AscentTimeAndDistance	AscentTimeAndDistance	
73	DescentTimeAndDistance	DescentTimeAndDistance	
74	Altitude	Altitude	
75	SustainedPhysActivitThresold	SustainedPhysActivitThresold	
76	CarbohydrateCaloritesIngested	CarbohydrateCaloritesIngested	

9.4.2. SetTime

(1) Description

Set time on a device.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/CardiovascularFitnessAndActivityMonitor/Service/SetTime

(3) Input parameters

Table 9.4.2-1: SetTime Service Input parameters

	Parameter	State Variables	Description
1	dateAndTime	DateAndTime	Set time on a Cardiovascular Fitness and Activity Monitor device.

(4) Output parameters

None.

9.4.3. GetIcon

(1) Description

Obtain an icon image data of a device.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/CardiovascularFitnessAndActivityMonitor/Service/GetIcon

(3) Input parameters

Table 9.4.3-1: GetIcon Service Input parameters

	Parameter	State Variables	Data Type	Description
1	url	-	string	Specify URL of Icon data.

(4) Output parameters

Table 9.4.3-2: GetIcon Service Output parameters

	Parameter	State Variables	Data Type	Description
1	mimeType	-	string	Specify MIME media type of the icon data.icon data.
2	base64Data	-	base64Binary	Set the icon data encode by BASE 64.

9.5. Meta Data

9.5.1. Device Meta Data

The Cardiovascular Fitness and Activity Monitor device Meta Data Template is shown in the followings.

Descriptions in Red Itallic Character : show values related to each cardiovascular fitness and activity monitor devices.

```
<?xml version="1.0"?>
<Device  type="http://www.pucc.jp/2012/03/Device/IEEE11073/CardiovascularFitnessAndActivityMonitor"
          id="global unique ID for this device"  name="short user-friendly title">
  <Specification>
    <URLBase>base URL for all relative URLs</URLBase>
    <Manufacturer>manufacturer name</Manufacturer>
    <ManufacturerURL>URL to manufacturer site</ManufacturerURL>
    <ManufactureDate>date of manufacture</ManufactureDate>
    <ModelDescription>long user-friendly title</ModelDescription>
    <ModelName>model name</ModelName>
    <ModelNumber>model number</ModelNumber>
    <ModelURL>URL to model site</ModelURL>
    <SerialNumber>manufacturer's serial number</SerialNumber>
    <UDN>uuid:UUID</UDN>
    <UPC>Universal Product Code</UPC>
    <IconList>
      <Icon>
        <Mimetype>image/format</Mimetype>
        <Width>horizontal pixels</Width>
        <Height>vertical pixels</Height>
        <Depth>color depth</Depth>
        <Url>URL to icon</Url>
      </Icon>
      XML to declare other icons, if any, go here
    </IconList>
  </Specification>
  <StateVariableList>
    <StateVariable  name="ProductionSpec"  datatype="array"  sendEvents="no">
     <StateVariable  name="ProdSpecEntry"  datatype="struct"  sendEvents="no">
      <StateVariable  name="SpecType"  datatype="string"  sendEvents="no"/>
      <StateVariable  name="ComponentId"  datatype="string"  sendEvents="no"/>
      <StateVariable  name="ProdSpec"  datatype="string"  sendEvents="no"/>
     </StateVariable>
    </StateVariable>
    <StateVariable  name="Version"  datatype="integer"  sendEvents="no"/>
    <StateVariable  name="DateAndTime"  datatype="dateTime"  sendEvents="no"/>
    <StateVariable  name="PersonId"  datatype="integer" sendEvents="yes"/>
```

```
<StateVariable name="MeasurementTime" datatype="dateTime" sendEvents="yes"/>
<StateVariable name="Session" datatype="struct" sendEvents="yes">
 <StateVariable name="SubSessionList" datatype="array" sendEvents="no">
  <StateVariable name="SubSession" datatype="struct" sendEvents="no">
   <StateVariable name="StartTime" datatype="dateTime" sendEvents="no"/>
   <StateVariable name="ActivityType" datatype="string" sendEvents="no">
    <AllowedValueList>
     <AllowedValue>Unknown</AllowedValue>
     <AllowedValue>Multiple</AllowedValue>
     <AllowedValue>Monitor</AllowedValue>
     <AllowedValue>Ski</AllowedValue>
     <AllowedValue>Run</AllowedValue>
     <AllowedValue>Bike</AllowedValue>
     <AllowedValue>Stair</AllowedValue>
     <AllowedValue>Row</AllowedValue>
     <AllowedValue>Home</AllowedValue>
     <AllowedValue>Work</AllowedValue>
     <AllowedValue>Walk</AllowedValue>
    </AllowedValueList>
   </StateVariable>
   <StateVariable name="Duration" datatype="integer" unit="s" sendEvents="no"/>
   <StateVariable name="UserMaxHeartRate" datatype="float" unit="BPM" sendEvents="no"/>
   <StateVariable name="HeartRate" datatype="float" unit="BPM" sendEvents="no"/>
   <StateVariable name="Intensity" datatype="float" unit="%" sendEvents="no"/>
   <StateVariable name="Latitude" datatype="float" unit="degree" sendEvents="no"/>
   <StateVariable name="Longitude" datatype="float" unit="degree" sendEvents="no"/>
   <StateVariable name="Speed" datatype="float" unit="m/s" sendEvents="no"/>
   <StateVariable name="Slope" datatype="float" sendEvents="no"/>
   <StateVariable name="AltitudeLoss" datatype="float" unit="m" sendEvents="no"/>
   <StateVariable name="AltitudeGain" datatype="float" unit="m" sendEvents="no"/>
   <StateVariable name="Distance" datatype="float" unit="m" sendEvents="no"/>
   <StateVariable name="Resistance" datatype="float" unit="m" sendEvents="no"/>
   <StateVariable name="Incline" datatype="float" unit="%" sendEvents="no"/>
   <StateVariable name="Power" datatype="float" unit="W" sendEvents="no"/>
   <StateVariable name="ProgramIdentifier" datatype="string" sendEvents="no"/>
   <StateVariable name="ActivityTime" datatype="string" sendEvents="no">
    <AllowedValueList>
     <AllowedValue>Ambulate</AllowedValue>
     <AllowedValue>Resting</AllowedValue>
     <AllowedValue>Monitoring</AllowedValue>
     <AllowedValue>LyingDown</AllowedValue>
     <AllowedValue>Sleeping</AllowedValue>
     <AllowedValue>Physical</AllowedValue>
    </AllowedValueList>
   </StateVariable>
   <StateVariable name="StrideLength" datatype="float" unit="m" sendEvents="no"/>
   <StateVariable name="Height" datatype="float" unit="m" sendEvents="no"/>
```

```
      <StateVariable   name="Weight"    datatype="float" unit="g" sendEvents="no"/>
      <StateVariable   name="EnergyExpanded"    datatype="float" unit="cal" sendEvents="no"/>
      <StateVariable   name="BreathingRate"    datatype="float" unit="resp/s" sendEvents="no"/>
      <StateVariable   name="CaloriesIngested" datatype="float" unit="cal" sendEvents="no"/>
      <StateVariable   name="Age" datatype="integer" sendEvents="no"/>
      <StateVariable   name="Cadence" datatype="float" unit="rpm" sendEvents="no"/>
      <StateVariable   name="Altitude" datatype="float" unit="m" sendEvents="no"/>
      <StateVariable   name="AscentTimeAndDistance" datatype="float" unit="cal" sendEvents="no"/>
      <StateVariable   name="DescentTimeAndDistance" datatype="float" unit="cal" sendEvents="no"/>
      <StateVariable   name="SustainedPhysActivitThresold" datatype="float" unit="s" sendEvents="no"/>
      <StateVariable   name="CarbohydrateCaloritesIngested" datatype="float" unit="s" sendEvents="no"/>
    </StateVariable>
  </StateVariable>
  <StateVariable   name="StartTime"    datatype="dateTime" sendEvents="no"/>
  <StateVariable   name="ActivityType"    datatype="string" sendEvents="no">
    <AllowedValueList>
      <AllowedValue>Unknown</AllowedValue>
      <AllowedValue>Multiple</AllowedValue>
      <AllowedValue>Monitor</AllowedValue>
      <AllowedValue>Ski</AllowedValue>
      <AllowedValue>Run</AllowedValue>
      <AllowedValue>Bike</AllowedValue>
      <AllowedValue>Stair</AllowedValue>
      <AllowedValue>Row</AllowedValue>
      <AllowedValue>Home</AllowedValue>
      <AllowedValue>Work</AllowedValue>
      <AllowedValue>Walk</AllowedValue>
    </AllowedValueList>
  </StateVariable>
  <StateVariable   name="Duration"    datatype="integer" unit="s" sendEvents="no"/>
  <StateVariable   name="UserMaxHeartRate"    datatype="float" unit="BPM" sendEvents="no"/>
  <StateVariable   name="HeartRate"    datatype="float" unit="BPM" sendEvents="no"/>
  <StateVariable   name="Intensity"    datatype="float" unit="%" sendEvents="no"/>
  <StateVariable   name="Latitude"    datatype="float" unit="degree" sendEvents="no"/>
  <StateVariable   name="Longitude"    datatype="float" unit="degree" sendEvents="no"/>
  <StateVariable   name="Speed"    datatype="float" unit="m/s" sendEvents="no"/>
  <StateVariable   name="Slope"    datatype="float" sendEvents="no"/>
  <StateVariable   name="AltitudeLoss"    datatype="float" unit="m" sendEvents="no"/>
  <StateVariable   name="AltitudeGain"    datatype="float" unit="m" sendEvents="no"/>
  <StateVariable   name="Distance"    datatype="float" unit="m" sendEvents="no"/>
  <StateVariable   name="Resistance"    datatype="float" unit="m" sendEvents="no"/>
  <StateVariable   name="Incline"    datatype="float" unit="%" sendEvents="no"/>
  <StateVariable   name="Power"    datatype="float" unit="W" sendEvents="no"/>
  <StateVariable   name="ProgramIdentifier"    datatype="string" sendEvents="no"/>
  <StateVariable   name="ActivityTime"    datatype="string" sendEvents="no">
    <AllowedValueList>
      <AllowedValue>Ambulate</AllowedValue>
```

```
          <AllowedValue>Resting</AllowedValue>
          <AllowedValue>Monitoring</AllowedValue>
          <AllowedValue>LyingDown</AllowedValue>
          <AllowedValue>Sleeping</AllowedValue>
          <AllowedValue>Physical</AllowedValue>
        </AllowedValueList>
      </StateVariable>
      <StateVariable   name="StrideLength"   datatype="float" unit="m" sendEvents="no"/>
      <StateVariable   name="Height"   datatype="float" unit="m" sendEvents="no"/>
      <StateVariable   name="Weight"   datatype="float" unit="g" sendEvents="no"/>
      <StateVariable   name="EnergyExpanded"   datatype="float" unit="cal" sendEvents="no"/>
      <StateVariable   name="BreathingRate"   datatype="float" unit="resp/s" sendEvents="no"/>
      <StateVariable   name="CaloriesIngested" datatype="float" unit="cal" sendEvents="no"/>
      <StateVariable   name="Age" datatype="integer" sendEvents="no"/>
      <StateVariable   name="Cadence" datatype="float" unit="rpm" sendEvents="no"/>
      <StateVariable   name="Altitude" datatype="float" unit="m" sendEvents="no"/>
      <StateVariable   name="AscentTimeAndDistance" datatype="float" unit="cal" sendEvents="no"/>
      <StateVariable   name="DescentTimeAndDistance" datatype="float" unit="cal" sendEvents="no"/>
      <StateVariable   name="SustainedPhysActivitThresold" datatype="float" unit="s" sendEvents="no"/>
      <StateVariable   name="CarbohydrateCaloritesIngested" datatype="float" unit="s" sendEvents="no"/>
    </StateVariable>
  </StateVariableList>
  <ServiceList>
    <Service   name="QueryStateVariable" type="http://www.pucc.jp/2012/03/Device/IEEE11073/
    CardiovascularFitnessAndActivityMonitor/Service/QueryStateVariable"/>
    <Service   name="SetTime" type="http://www.pucc.jp/2012/03/Device/IEEE11073/
    CardiovascularFitnessAndActivityMonitor/Service/SetTime"/>
    <Service   name="GetIcon" type="http://www.pucc.jp/2012/03/Device/IEEE11073/
    CardiovascularFitnessAndActivityMonitor/Service/GetIcon"/>
  </ServiceList>
  <PrimitiveDeviceList/>
  <EventConditionList/>
</Device>
```


9.5.2. Service Meta Data

The Service Meta Data Template of Cardiovascular Fitness and Activity Monitor device is shown in the followings.

(1)QueryStateVariable Service Meta Data

```
<?xml version="1.0" ?>
<Service type="http://www.pucc.jp/2012/03/Device/IEEE11073/CardiovascularFitnessAndActivityMonitor/
  Service/QueryStateVariable" name="QueryStateVariable">
  <InputParameterList>
    <Parameter  name="ProductionSpec"  datatype="array"  sendEvents="no">
     <Parameter  name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
      <Parameter  name="SpecType" relatedStateVariable="SpecType"/>
      <Parameter  name="ComponentId" relatedStateVariable="ComponentId"/>
      <Parameter  name="ProdSpec" relatedStateVariable="ProdSpec"/>
     </Parameter>
    </Parameter>
    <Parameter  name="Version" relatedStateVariable="Version"/>
    <Parameter  name="DateAndTime" relatedStateVariable="DateAndTime"/>
    <Parameter  name="PersonId" relatedStateVariable="PersonId"/>
    <Parameter  name="MeasurementTime" relatedStateVariable="MeasurementTime"/>
    <Parameter  name="Session" relatedStateVariable="Session">
     <Parameter  name="SubSessionList" relatedStateVariable="SubSessionList">
      <Parameter  name="SubSession" relatedStateVariable="SubSession">
       <Parameter  name="StartTime" relatedStateVariable="StartTime"/>
       <Parameter  name="ActivityType" relatedStateVariable="ActivityType"/>
       <Parameter  name="Duration" relatedStateVariable="Duration"/>
       <Parameter  name="UserMaxHeartRate" relatedStateVariable="UserMaxHeartRate"/>
       <Parameter  name="HeartRate" relatedStateVariable="HeartRate"/>
       <Parameter  name="Intensity" relatedStateVariable="Intensity"/>
       <Parameter  name="Latitude" relatedStateVariable="Latitude"/>
       <Parameter  name="Longitude" relatedStateVariable="Longitude"/>
       <Parameter  name="Speed" relatedStateVariable="Speed"/>
       <Parameter  name="Slope" relatedStateVariable="Slope"/>
       <Parameter  name="AltitudeLoss" relatedStateVariable="AltitudeLoss"/>
       <Parameter  name="AltitudeGain" relatedStateVariable="AltitudeGain"/>
       <Parameter  name="Distance" relatedStateVariable="Distance"/>
       <Parameter  name="Resistance" relatedStateVariable="Resistance"/>
       <Parameter  name="Incline" relatedStateVariable="Incline"/>
       <Parameter  name="Power" relatedStateVariable="Power"/>
       <Parameter  name="ProgramIdentifier" relatedStateVariable="ProgramIdentifier"/>
       <Parameter  name="ActivityTime" relatedStateVariable="ActivityTime"/>
       <Parameter  name="StrideLength" relatedStateVariable="StrideLength"/>
       <Parameter  name="Height" relatedStateVariable="Height"/>
```

```
        <Parameter    name="Weight" relatedStateVariable="Weight"/>
        <Parameter    name="EnergyExpanded" relatedStateVariable="EnergyExpanded"/>
        <Parameter    name="BreathingRate" relatedStateVariable="BreathingRate"/>
        <Parameter    name="CaloriesIngested" relatedStateVariable="CaloriesIngested"/>
        <Parameter    name="Age" relatedStateVariable="Age"/>
        <Parameter    name="Cadence" relatedStateVariable="Cadence"/>
        <Parameter    name="Altitude" relatedStateVariable="Altitude"/>
        <Parameter    name="AscentTimeAndDistance" relatedStateVariable="AscentTimeAndDistance"/>
        <Parameter    name="DescentTimeAndDistance" relatedStateVariable="DescentTimeAndDistance"/>
        <Parameter    name="SustainedPhysActivitThresold"
              relatedStateVariable="SustainedPhysActivitThresold"/>
        <Parameter    name="CarbohydrateCaloritesIngested"
              relatedStateVariable="CarbohydrateCaloritesIngested"/>
      </Parameter>
    </Parameter>
    <Parameter    name="StartTime" relatedStateVariable="StartTime"/>
    <Parameter    name="ActivityType" relatedStateVariable="ActivityType"/>
    <Parameter    name="Duration" relatedStateVariable="Duration"/>
    <Parameter    name="UserMaxHeartRate" relatedStateVariable="UserMaxHeartRate"/>
    <Parameter    name="HeartRate" relatedStateVariable="HeartRate"/>
    <Parameter    name="Intensity" relatedStateVariable="Intensity"/>
    <Parameter    name="Latitude" relatedStateVariable="Latitude"/>
    <Parameter    name="Longitude" relatedStateVariable="Longitude"/>
    <Parameter    name="Speed" relatedStateVariable="Speed"/>
    <Parameter    name="Slope" relatedStateVariable="Slope"/>
    <Parameter    name="AltitudeLoss" relatedStateVariable="AltitudeLoss"/>
    <Parameter    name="AltitudeGain" relatedStateVariable="AltitudeGain"/>
    <Parameter    name="Distance" relatedStateVariable="Distance"/>
    <Parameter    name="Resistance" relatedStateVariable="Resistance"/>
    <Parameter    name="Incline" relatedStateVariable="Incline"/>
    <Parameter    name="Power" relatedStateVariable="Power"/>
    <Parameter    name="ProgramIdentifier" relatedStateVariable="ProgramIdentifier"/>
    <Parameter    name="ActivityTime" relatedStateVariable="ActivityTime"/>
    <Parameter    name="StrideLength" relatedStateVariable="StrideLength"/>
    <Parameter    name="Height" relatedStateVariable="Height"/>
    <Parameter    name="Weight" relatedStateVariable="Weight"/>
    <Parameter    name="EnergyExpanded" relatedStateVariable="EnergyExpanded"/>
    <Parameter    name="BreathingRate" relatedStateVariable="BreathingRate"/>
    <Parameter    name="CaloriesIngested" relatedStateVariable="CaloriesIngested"/>
    <Parameter    name="Age" relatedStateVariable="Age"/>
    <Parameter    name="Cadence" relatedStateVariable="Cadence"/>
    <Parameter    name="Altitude" relatedStateVariable="Altitude"/>
    <Parameter    name="AscentTimeAndDistance" relatedStateVariable="AscentTimeAndDistance"/>
    <Parameter    name="DescentTimeAndDistance" relatedStateVariable="DescentTimeAndDistance"/>
    <Parameter    name="SustainedPhysActivitThresold"
          relatedStateVariable="SustainedPhysActivitThresold"/>
    <Parameter    name="CarbohydrateCaloritesIngested"
```

```
            relatedStateVariable="CarbohydrateCaloritesIngested"/>
    </Parameter>
  </InputParameterList>
  <OutputParameterList>
    <Parameter   name="ProductionSpec"   datatype="array"   sendEvents="no">
     <Parameter   name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
       <Parameter   name="SpecType" relatedStateVariable="SpecType"/>
       <Parameter   name="ComponentId" relatedStateVariable="ComponentId"/>
       <Parameter   name="ProdSpec"/>
     </Parameter>
    </Parameter>
    <Parameter   name="Version" relatedStateVariable="Version"/>
    <Parameter   name="DateAndTime" relatedStateVariable="DateAndTime"/>
    <Parameter   name="PersonId" relatedStateVariable="PersonId"/>
    <Parameter   name="MeasurementTime" relatedStateVariable="MeasurementTime"/>
    <Parameter   name="Session" relatedStateVariable="Session">
     <Parameter   name="SubSessionList" relatedStateVariable="SubSessionList">
       <Parameter   name="SubSession" relatedStateVariable="SubSession">
         <Parameter   name="StartTime" relatedStateVariable="StartTime"/>
         <Parameter   name="ActivityType" relatedStateVariable="ActivityType"/>
         <Parameter   name="Duration" relatedStateVariable="Duration"/>
         <Parameter   name="UserMaxHeartRate" relatedStateVariable="UserMaxHeartRate"/>
         <Parameter   name="HeartRate" relatedStateVariable="HeartRate"/>
         <Parameter   name="Intensity" relatedStateVariable="Intensity"/>
         <Parameter   name="Latitude" relatedStateVariable="Latitude"/>
         <Parameter   name="Longitude" relatedStateVariable="Longitude"/>
         <Parameter   name="Speed" relatedStateVariable="Speed"/>
         <Parameter   name="Slope" relatedStateVariable="Slope"/>
         <Parameter   name="AltitudeLoss" relatedStateVariable="AltitudeLoss"/>
         <Parameter   name="AltitudeGain" relatedStateVariable="AltitudeGain"/>
         <Parameter   name="Distance" relatedStateVariable="Distance"/>
         <Parameter   name="Resistance" relatedStateVariable="Resistance"/>
         <Parameter   name="Incline" relatedStateVariable="Incline"/>
         <Parameter   name="Power" relatedStateVariable="Power"/>
         <Parameter   name="ProgramIdentifier" relatedStateVariable="ProgramIdentifier"/>
         <Parameter   name="ActivityTime" relatedStateVariable="ActivityTime"/>
         <Parameter   name="StrideLength" relatedStateVariable="StrideLength"/>
         <Parameter   name="Height" relatedStateVariable="Height"/>
         <Parameter   name="Weight" relatedStateVariable="Weight"/>
         <Parameter   name="EnergyExpanded" relatedStateVariable="EnergyExpanded"/>
         <Parameter   name="BreathingRate" relatedStateVariable="BreathingRate"/>
         <Parameter   name="CaloriesIngested" relatedStateVariable="CaloriesIngested"/>
         <Parameter   name="Age" relatedStateVariable="Age"/>
         <Parameter   name="Cadence" relatedStateVariable="Cadence"/>
         <Parameter   name="Altitude" relatedStateVariable="Altitude"/>
         <Parameter   name="AscentTimeAndDistance" relatedStateVariable="AscentTimeAndDistance"/>
         <Parameter   name="DescentTimeAndDistance" relatedStateVariable="DescentTimeAndDistance"/>
```

```
        <Parameter    name="SustainedPhysActivitThresold"
              relatedStateVariable="SustainedPhysActivitThresold"/>
        <Parameter    name="CarbohydrateCaloritesIngested"
              relatedStateVariable="CarbohydrateCaloritesIngested"/>
       </Parameter>
      </Parameter>
      <Parameter    name="StartTime" relatedStateVariable="StartTime"/>
      <Parameter    name="ActivityType" relatedStateVariable="ActivityType"/>
      <Parameter    name="Duration" relatedStateVariable="Duration"/>
      <Parameter    name="UserMaxHeartRate" relatedStateVariable="UserMaxHeartRate"/>
      <Parameter    name="HeartRate" relatedStateVariable="HeartRate"/>
      <Parameter    name="Intensity" relatedStateVariable="Intensity"/>
      <Parameter    name="Latitude" relatedStateVariable="Latitude"/>
      <Parameter    name="Longitude" relatedStateVariable="Longitude"/>
      <Parameter    name="Speed" relatedStateVariable="Speed"/>
      <Parameter    name="Slope" relatedStateVariable="Slope"/>
      <Parameter    name="AltitudeLoss" relatedStateVariable="AltitudeLoss"/>
      <Parameter    name="AltitudeGain" relatedStateVariable="AltitudeGain"/>
      <Parameter    name="Distance" relatedStateVariable="Distance"/>
      <Parameter    name="Resistance" relatedStateVariable="Resistance"/>
      <Parameter    name="Incline" relatedStateVariable="Incline"/>
      <Parameter    name="Power" relatedStateVariable="Power"/>
      <Parameter    name="ProgramIdentifier" relatedStateVariable="ProgramIdentifier"/>
      <Parameter    name="ActivityTime" relatedStateVariable="ActivityTime"/>
      <Parameter    name="StrideLength" relatedStateVariable="StrideLength"/>
      <Parameter    name="Height" relatedStateVariable="Height"/>
      <Parameter    name="Weight" relatedStateVariable="Weight"/>
      <Parameter    name="EnergyExpanded" relatedStateVariable="EnergyExpanded"/>
      <Parameter    name="BreathingRate" relatedStateVariable="BreathingRate"/>
      <Parameter    name="CaloriesIngested" relatedStateVariable="CaloriesIngested"/>
      <Parameter    name="Age" relatedStateVariable="Age"/>
      <Parameter    name="Cadence" relatedStateVariable="Cadence"/>
      <Parameter    name="Altitude" relatedStateVariable="Altitude"/>
      <Parameter    name="AscentTimeAndDistance" relatedStateVariable="AscentTimeAndDistance"/>
      <Parameter    name="DescentTimeAndDistance" relatedStateVariable="DescentTimeAndDistance"/>
      <Parameter    name="SustainedPhysActivitThresold"
            relatedStateVariable="SustainedPhysActivitThresold"/>
      <Parameter    name="CarbohydrateCaloritesIngested"
            relatedStateVariable="CarbohydrateCaloritesIngested"/>
     </Parameter>
   </OutputParameterList>
</Service>
```


(2)SetTime Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon"type="http://www.pucc.jp/2012/03/Device/IEEE11073/
      CardiovascularFitnessAndActivityMonitor/Service/SetTime">
   <InputParameterList>
      <Parameter name="dateAndTime" relatedStateVariable="DateAndTime"/>
   </InputParameterList>
   <OutputParameterList/>
</Service>
```

(3)GetIcon Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon"type="http://www.pucc.jp/2012/03/Device/IEEE11073/
      CardiovascularFitnessAndActivityMonitor/Service/GetIcon">
   <InputParameterList>
      <Parameter name="url" datatype="string"/>
   </InputParameterList>
   <OutputParameterList>
      <Parameter name="mimeType" datatype="string"/>
      <Parameter name="base64Data" datatype="base64Binary"/>
   </OutputParameterList>
</Service>
```

10. Independent Living Activity Hub Device

In this section, the Independent Living Activity Hub device Meta Data is specified.

10.1. Device Model

The device model of a Independent Living Activity Hub device is shown below,

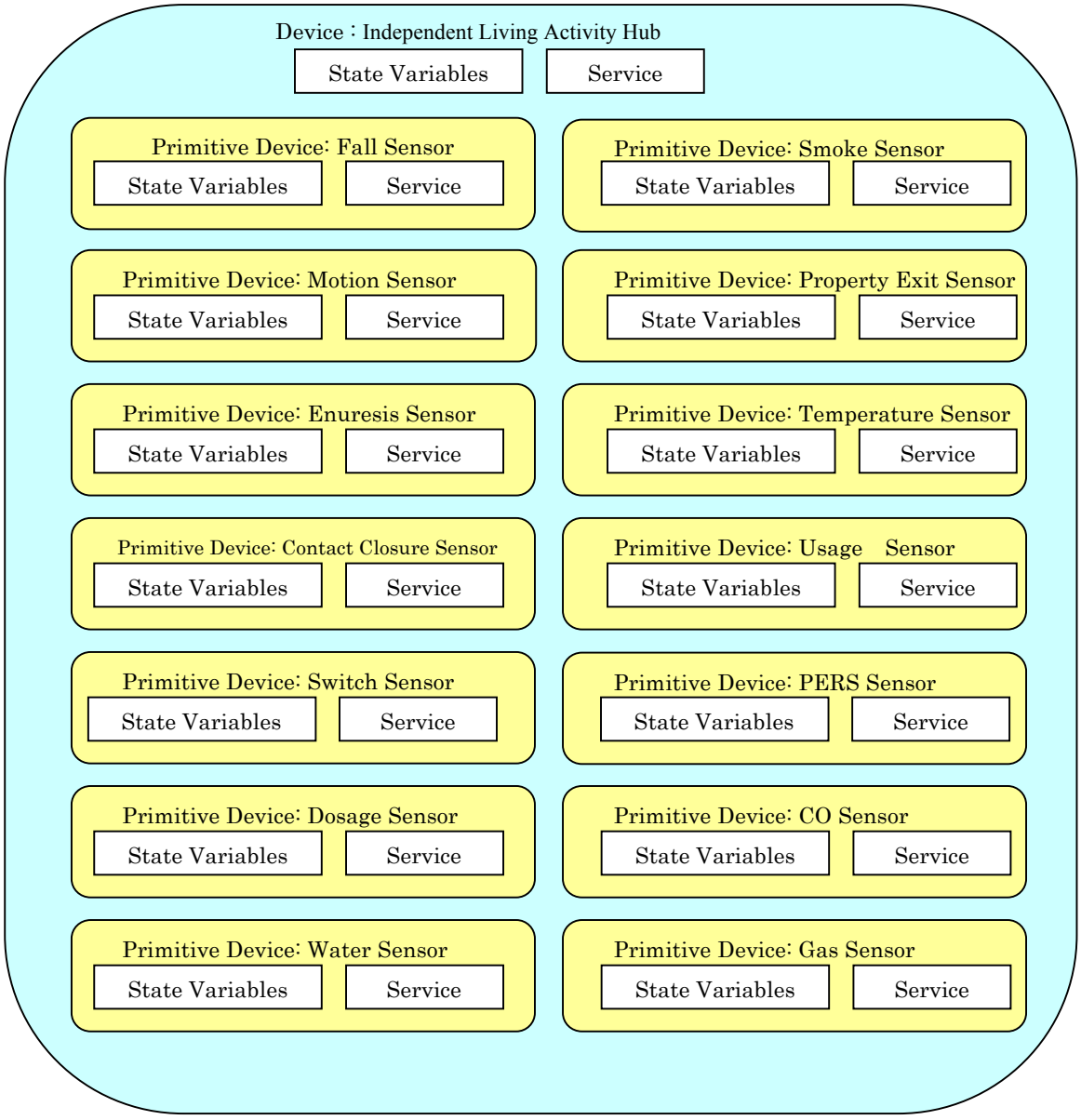


Figure 10.1-1. Device Model of a Independent Living Activity Hub Device

10.2. Device Type

The Device Type ID (URL form) of a Independent Living Activity Hub device is shown below,

http://www.pucc.jp/2012/03/Device/IEEE11073/IndependentLivingActivityHub

10.3. State Variables

The state varibales of a Independent Living Activity Hub device is shown in the following table.

Table 10.3-1: State varibales of a Independent Living Activity Hub device

	State Variable Name	Description	Data Type	Event
1	ProductionSpec	List of device manufacturer's informationation	array	No
2	ProdSpecEntry	Manufacture's informationmation	struct	No
3	SpecType	Information Type. Enable values are as follows, "unspecified" "part-number" "hw-revision" "sw-revision" "fw-revision" "protocol-revision" "prod-spec-gmdn"	string	No
4	ComponentID	Component ID	integer	No
5	ProdSpec	Manufacture's informationmation	integer	No
6	Version	Device Version. In the case of IEEE11073-10415, value SHOULD be "1"	integer	No
7	DateAndTime	Current date and time value indicated by a devicedevice	dateTime	No

10.4. Service

Independent Lining Activity Hub device's services are shown in the following table.

Table 10.4-1: Independent Living Activity Hub device's services

	Service	Description
1	QueryStateVariable	Query Independent Lining Activity Hub device'e State Variables.
2	SetTime	Set time on an Independent Lining Activity Hub device.
3	GetIcon	Get Icon image of Independent Lining Activity Hub device.

The followings are each service's description.

10.4.1. QueryStateVariable

(1) Description

Query Independent Lining Activity Hub device'e State Variables.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/IndependentLiningActivityHub/Service/QueryStateVariable

(3) Input parameters

Table 10.4.1-1: QueryStateVariable Service Input parameters

	Parameter	State Variables	Description
1	ProductionSpec	ProductionSpec	Values SHOULD NOT specified for query.
2	ProdSpecEntry	ProdSpecEntry	
3	SpecType	SpecType	
4	ComponentId	ComponentId	
5	ProdSpec	ProdSpec	
6	Version	Version	
7	DateAndTime	DateAndTime	

(4) Output parameters

Table 10.4.1-2: QueryStateVariable Service Output parameters

	Parameter	State Variables	Description
1	ProductionSpec	ProductionSpec	Value of the specified parameter as input SHOULD be included in output.
2	Version	Version	
3	DateAndTime	DateAndTime	
4	PersonId	PersonId	
5	MeasurementTime	MeasurementTime	
6	Weight	Weight	
7	Height	Height	
8	BMI	BMI	

10.4.2. SetTime

(1) Description

Set time on a device.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/IndependentLiningActivityHub/Service/SetTime

(3) Input parameters

Table 10 .4.2-1: SetTime Service Input parameters

	Parameter	State Variables	Description
1	dateAndTime	DateAndTime	Set time on an Independent Lining Activity Hub device.

(4) Output parameters

None.

10.4.3. GetIcon

(1) Description

Obtain an icon image data of a device.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/IndependentLiningActivityHub/Service/GetIcon

(3) Input parameters

Table 10.4.3-1: GetIcon Service Input parameters

	Parameter	State Variables	Data Type	Description
1	url	-	string	Specify URL of Icon data.

(4) Output parameters

Table 10.4.3-2: GetIcon Service Output parameters

	Parameter	State Variables	Data Type	Description
1	mimeType	-	string	Specify MIME media type of the icon data.icon data.
2	base64Data	-	base64Binary	Set the icon data encode by BASE 64.

10.5. Primitive Devices

10.5.1. Fall Sensor Primitive Device

10.5.1.1. Device Type

The Device Type ID (URL form) of a Fall Sensor device is shown below,

http://www.pucc.jp/2012/03/Device/IEEE11073/FallSensor

10.5.1.2. State Variables

The state varibales of a Fall Sensor primitive device is shown in the following table.

Table 10.5.1.2-1: State varibales of a Fall Sensor primitive device

	State Variable Name	Description	Data Type	Event
1	LocationType	Location Type. Enable value are as follows, "Start" "Unknown" "Unspecified" "Resident" "Localunit" "Bedroom" "BedroomMaster" "Toilet" "ToiletMain" "OutsideToilet" "ShowerRoom" "Kitchen" "KitchenMain" "LivingArea" "LivingRoom" "DiningRoom" "Study" "Hall" "Landing" "Stairs" HallLandingStairs" "Garage" "GardenGarage" "GardenGarageArea" "FrontGarden" "BackGarden" "Shed"	string	Yes
2	LocationTypeIdentifier	Location Type Identifier	integer	Yes
3	PersonId	User ID	string	Yes
4	MeasurementTime	Last measurement time provided by a device	dateTime	Yes
5	FallDetectedFlag	Fall Detected Flag	boolean	Yes

10.5.1.3. Service

Fall Sensor primitive device's services are shown in the following table.

Table 10.5.1.3-1: Fall Sensor primitive device's services

	Service	Description
1	QueryStateVariable	Query Fall Sensor primitive device'e State Variables.
2	GetIcon	Get Icon image of Fall Sensor primitive device.

The followings are each service's description.

10.5.1.3.1. QueryStateVariable

(1) Description

Query Fall Sensor primitive device'e State Variables.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/FallSensor/Service/QueryStateVariable

(3) Input parameters

Table 10.5.1.3.1-1: QueryStateVariable Service Input parameters

	Parameter	State Variables	Description
1	LocationType	LocationType	Values SHOULD NOT specified for query.
2	LocationIdentifier	LocationIdentifier	
3	PersonId	PersonId	
4	MeasurementTime	MeasurementTime	
5	FallDetectedFlag	FallDetectedFlag	

(4) Output parameters

Table 10.5.1.3.1-2: QueryStateVariable Service Output parameters

	Parameter	State Variables	Description
1	LocationType	LocationType	Value of the specified parameter as input SHOULD be included in output.
2	LocationIdentifier	LocationIdentifier	
3	PersonId	PersonId	
4	MeasurementTime	MeasurementTime	
5	FallDetectedFlag	FallDetectedFlag	

10.5.1.3.2. GetIcon

(1) Description

Obtain an icon image data of a device.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/FallSensor/Service/GetIcon

(3) Input parameters

Table 10.5.1.3.2-1: GetIcon Service Input parameters

	Parameter	State Variables	Data Type	Description
1	url	-	string	Specify URL of Icon data.

(4) Output parameters

Table 10.5.1.3.2-2: GetIcon Service Output parameters

	Parameter	State Variables	Data Type	Description
1	mimeType	-	string	Specify MIME media type of the icon data.icon data.
2	base64Data	-	base64Binary	Set the icon data encode by BASE 64.

10.5.2. PERS (Personal Emergency Response System) Sensor Primitive Device

10.5.2.1. Device Type

The Device Type ID (URL form) of a PERS (Personal Emergency Response System) Sensor primitive device is shown below,

http://www.pucc.jp/2012/03/Device/IEEE11073/PERSSensor

10.5.2.2. State Variables

The state varibales of a PERS Sensor primitive device is shown in the following table.

Table 10.5.2.2-1: State varibales of a PERS Sensor primitive device

	State Variable Name	Description	Data Type	Event
1	LocationType	Location Type. Refer enable values to Table 10.3-2	string	Yes
2	LocationTypeIdentifier	Location Type Identifier	integer	Yes
3	PersonId	User ID	string	Yes
4	MeasurementTime	Last measurement time provided by a device	dateTime	Yes
5	PERSActivatedFlag	Detection flag of PERS activated.	boolean	Yes

10.5.2.3. Service

PERS Sensor primitive device's services are shown in the following table.

Table 10.5.2.3-1: PERS Sensor primitive device's services

	Service	Description
1	QueryStateVariable	Query PERS Sensor primitive device'e State Variables.
2	GetIcon	Get Icon image of PERS Sensor primitive device

The followings are each service's description.

10.5.2.3.1. QueryStateVariable

(1) Description

Query PERS Sensor primitive device'e State Variables.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/PERSSensor/Service/QueryStateVariable

(3) Input parameters

Table 10.5.2.3.1-1: QueryStateVariable Service Input parameters

	Parameter	State Variables	Description
1	LocationType	LocationType	Values SHOULD NOT specified for query.
2	LocationIdentifier	LocationIdentifier	
3	PersonId	PersonId	
4	MeasurementTime	MeasurementTime	
5	PERSActivatedFlag	PERSActivatedFlag	

(4) Output parameters

Table 10.5.2.3.1-2: QueryStateVariable Service Output parameters

	Parameter	State Variables	Description
1	LocationType	LocationType	Value of the specified parameter as input SHOULD be included in output.
2	LocationIdentifier	LocationIdentifier	
3	PersonId	PersonId	
4	MeasurementTime	MeasurementTime	
5	PERSActivatedFlag	PERSActivatedFlag	

10.5.2.3.2. GetIcon

(1) Description

Obtain an icon image data of a device.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/PERSSensor/Service/GetIcon

(3) Input parameters

Table 10.5.2.3.2-1: GetIcon Service Input parameters

	Parameter	State Variables	Data Type	Description
1	url	-	string	Specify URL of Icon data.

(4) Output parameters

Table 10.5.2.3.2-2: GetIcon Service Output parameters

	Parameter	State Variables	Data Type	Description
1	mimeType	-	string	Specify MIME media type of the icon data.icon data.
2	base64Data	-	base64Binary	Set the icon data encode by BASE 64.

10.5.3. Smoke Sensor Primitive Device

10.5.3.1. Device Type

The Device Type ID (URL form) of a Smoke Sensor primitive device is shown below,

http://www.pucc.jp/2012/03/Device/IEEE11073/SmokeSensor

10.5.3.2. State Variables

The state varibales of a Smoke Sensor premitive device is shown in the following table.

Table 10.5.3.2-1: State varibales of a Smoke Sensor premitive device

	State Variable Name	Description	Data Type	Event
1	LocationType	Location Type Refer enable values to Table 10.3-2	string	Yes
2	LocationTypeIdentifier	Location Identifier	integer	Yes
3	PersonId	User ID	string	Yes
4	MeasurementTime	Last measurement time provided by a device	dateTime	Yes
5	ConditionDetectedFlag	Detection flag of smoke depending on the given condition	boolean	Yes

10.5.3.3. Service

Smoke Sensor primitive device's services are shown in the following table.

Table 10.5.3.3-1: Smoke Sensor primitive device's services

	Service	Description
1	QueryStateVariable	Query Smoke Sensor primitive device'e State Variables.
2	GetIcon	Get Icon image of Smoke Sensor primitive device

The followings are each service' s description.

10.5.3.3.1. QueryStateVariable

(1) Description

Query Smoke Sensor primitive device'e State Variables.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/SmokeSensor/Service/QueryStateVariable

(3) Input parameters

Table 10.5.3.3.1-1: QueryStateVariable Service Input parameters

	Parameter	State Variables	Description
1	LocationType	LocationType	Values SHOULD NOT specified for query.
2	LocationIdentifier	LocationIdentifier	
3	PersonId	PersonId	
4	MeasurementTime	MeasurementTime	
5	ConditionDetectedFlag	ConditionDetectedFlag	

(4) Output parameters

Table 10.5.3.3.1-2: QueryStateVariable Service Output parameters

	Parameter	State Variables	Description
1	LocationType	LocationType	Value of the specified parameter as input SHOULD be included in output.
2	LocationIdentifier	LocationIdentifier	
3	PersonId	PersonId	
4	MeasurementTime	MeasurementTime	
5	ConditionDetectedFlag	ConditionDetectedFlag	

10.5.3.3.2. GetIcon

(1) Description

Obtain an icon image data of a device.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/SmokeSensor/Service/GetIcon

(3) Input parameters

Table 10.5.3.3.2-1: GetIcon Service Input parameters

	Parameter	State Variables	Data Type	Description
1	url	-	string	Specify URL of Icon data.

(4) Output parameters

Table 10.5.3.3.2-2: GetIcon Service Output parameters

	Parameter	State Variables	Data Type	Description
1	mimeType	-	string	Specify MIME media type of the icon data.icon data.
2	base64Data	-	base64Binary	Set the icon data encode by BASE 64.

10.5.4. CO Sensor Primitive Device

10.5.4.1. Device Type

The Device Type ID (URL form) of a CO Sensor primitive device is shown below,

http://www.pucc.jp/2012/03/Device/IEEE11073/COSensor

10.5.4.2. State Variables

The state varibales of a CO Sensor primitive device is shown in the following table.

Table 10.5.4.2-1: State varibales of a CO Sensor primitive device

	State Variable Name	Description	Data Type	Event
1	LocationType	Location Type Refer enable values to Table 10.3-2	string	Yes
2	LocationTypeIdentifier	Location Type Identifier	integer	Yes
3	PersonId	User ID	string	Yes
4	MeasurementTime	Last measurement time provided by a device	dateTime	Yes
5	ConditionDetectedFlag	Detection flag of CO depending on the given condition	boolean	Yes

10.5.4.3. Service

CO Sensor primitive device's services are shown in the following table.

Table 10.5.4.3-1: CO Sensor primitive device's services

	Service	Description
1	QueryStateVariable	Query CO Sensor primitive device'e State Variables.
2	GetIcon	Get Icon image of CO Sensor primitive device

The followings are each service's description.

10.5.4.3.1. QueryStateVariable

(1) Description

Query CO Sensor primitive device'e State Variables.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/COSensor/Service/QueryStateVariable

(3) Input parameters

Table 10.5.4.3.1-1: QueryStateVariable Service Input parameters

	Parameter	State Variables	Description
1	LocationType	LocationType	Values SHOULD NOT specified for query.
2	LocationIdentifier	LocationIdentifier	
3	PersonId	PersonId	
4	MeasurementTime	MeasurementTime	
5	ConditionDetectedFlag	ConditionDetectedFlag	

(4) Output parameters

Table 10.5.4.3.1-2: QueryStateVariable Service Output parameters

	Parameter	State Variables	Description
1	LocationType	LocationType	Value of the specified parameter as input SHOULD be included in output.
2	LocationIdentifier	LocationIdentifier	
3	PersonId	PersonId	
4	MeasurementTime	MeasurementTime	
5	ConditionDetectedFlag	ConditionDetectedFlag	

10.5.4.3.2. GetIcon

(1) Description

Obtain an icon image data of a device.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/COSensor/Service/GetIcon

(3) Input parameters

Table 10.5.4.3.2-1: GetIcon Service Input parameters

	Parameter	State Variables	Data Type	Description
1	url	-	string	Specify URL of Icon data.

(4) Output parameters

Table 10.5.4.3.2-2: GetIcon Service Output parameters

	Parameter	State Variables	Data Type	Description
1	mimeType	-	string	Specify MIME media type of the icon data.icon data.
2	base64Data	-	base64Binary	Set the icon data encode by BASE 64.

10.5.5. Water Sensor Primitive Device

10.5.5.1. Device Type

The Device Type ID (URL form) of a Water Sensor primitive device is shown below,

http://www.pucc.jp/2012/03/Device/IEEE11073/WaterSensor

10.5.5.2. State Variables

The state varibales of a Water Sensor primitive device is shown in the following table.

Table 10.5.5.2-1: State varibales of a Water Sensor primitive device

	State Variable Name	Description	Data Type	Event
1	LocationType	Location Type Refer enable values to Table 10.3-2	string	Yes
2	LocationTypeIdentifier	Location Type Identifier	integer	Yes
3	PersonId	User ID	string	Yes
4	MeasurementTime	Last measurement time provided by a device	dateTime	Yes
5	ConditionDetectedFlag	Detection flag of water depending on the given condition	boolean	Yes

10.5.5.3. Service

Water Sensor primitive device's services are shown in the following table.

Table 10.5.5.3-1: Water Sensor primitive device's services

	Service	Description
1	QueryStateVariable	Query Water Sensor primitive device'e State Variables.
2	GetIcon	Get Icon image of Water Sensor primitive device

The followings are each service's description.

10.5.5.3.1. QueryStateVariable

(1) Description

Query Water Sensor primitive device'e State Variables.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/WaterSensor/Service/QueryStateVariable

(3) Input parameters

Table 10.5.5.3.1-1: QueryStateVariable Service Input parameters

	Parameter	State Variables	Description
1	LocationType	LocationType	Values SHOULD NOT specified for query.
2	LocationIdentifier	LocationIdentifier	
3	PersonId	PersonId	
4	MeasurementTime	MeasurementTime	
5	ConditionDetectedFlag	ConditionDetectedFlag	

(4) Output parameters

Table 10.5.5.3.1-2: QueryStateVariable Service Output parameters

	Parameter	State Variables	Description
1	LocationType	LocationType	Value of the specified parameter as input SHOULD be included in output.
2	LocationIdentifier	LocationIdentifier	
3	PersonId	PersonId	
4	MeasurementTime	MeasurementTime	
5	ConditionDetectedFlag	ConditionDetectedFlag	

10.5.5.3.2. GetIcon

(1) Description

Obtain an icon image data of a device.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/WaterSensor/Service/GetIcon

(3) Input parameters

Table 10.5.5.3.2-1: GetIcon Service Input parameters

	Parameter	State Variables	Data Type	Description
1	url	-	string	Specify URL of Icon data.

(4) Output parameters

Table 10.5.5.3.2-2: GetIcon Service Output parameters

	Parameter	State Variables	Data Type	Description
1	mimeType	-	string	Specify MIME media type of the icon data.icon data.
2	base64Data	-	base64Binary	Set the icon data encode by BASE 64.

10.5.6. Gas Sensor Primitive Device

10.5.6.1. Device Type

The Device Type ID (URL form) of a Gas Sensor primitive device is shown below,

http://www.pucc.jp/2012/03/Device/IEEE11073/GasSensor

10.5.6.2. State Variables

The state varibales of a Gas Sensor primitive device is shown in the following table.

Table 10.5.6.2-1: State varibales of a Gas Sensor primitive device

	State Variable Name	Description	Data Type	Event
1	LocationType	Location Type Refer enable values to Table 10.3-2	string	Yes
2	LocationTypeIdentifier	Location Type Identifier	integer	Yes
3	PersonId	User ID	string	Yes
4	MeasurementTime	Last measurement time provided by a device	dateTime	Yes
5	ConditionDetectedFlag	Detection flag of gas depending on the given condition	boolean	Yes

10.5.6.3. Service

Gas Sensor primitive device's services are shown in the following devices.

Table 10.5.6.3-1: Gas Sensor primitive device's services

	Service	Description
1	QueryStateVariable	Query Gas Sensor primitive device'e State Variables.
2	GetIcon	Get Icon image of Gas Sensor primitive device

The followings are each service's description.

10.5.6.3.1. QueryStateVariable

(1) Description

Query Gas Sensor primitive device'e State Variables.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/GasSensor/Service/QueryStateVariable

(3) Input parameters

Table 10.5.6.3.1-1: QueryStateVariable Service Input parameters

	Parameter	State Variables	Description
1	LocationType	LocationType	Values SHOULD NOT specified for query.
2	LocationIdentifier	LocationIdentifier	
3	PersonId	PersonId	
4	MeasurementTime	MeasurementTime	
5	ConditionDetectedFlag	ConditionDetectedFlag	

(4) Output parameters

Table 10.5.6.3.1-2: QueryStateVariable Service Output parameters

	Parameter	State Variables	Description
1	LocationType	LocationType	Value of the specified parameter as input SHOULD be included in output.
2	LocationIdentifier	LocationIdentifier	
3	PersonId	PersonId	
4	MeasurementTime	MeasurementTime	
5	ConditionDetectedFlag	ConditionDetectedFlag	

10.5.6.3.2. GetIcon

(1) Description

Obtain an icon image data of a device.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/GasSensor/Service/GetIcon

(3) Input parameters

Table 10.5.6.3.2-1: GetIcon Service Input parameters

	Parameter	State Variables	Data Type	Description
1	url	-	string	Specify URL of Icon data.

(4) Output parameters

Table 10.5.6.3.2-2: GetIcon Service Output parameters

	Parameter	State Variables	Data Type	Description
1	mimeType	-	string	Specify MIME media type of the icon data.icon data.
2	base64Data	-	base64Binary	Set the icon data encode by BASE 64.

10.5.7. Motion Sensor Primitive Device

10.5.7.1. Device Type

The Device Type ID (URL form) of a Motion Snsor primitive device is shown below,

http://www.pucc.jp/2012/03/Device/IEEE11073/MotionSensor

10.5.7.2. State Variables

The state varibales of a Motion Sensor primitive device is shown in the following table.

Table 10.5.7.2-1: State varibales of a Motion Sensor primitive device

	State Variable Name	Description	Data Type	Event
1	LocationType	Location Type Refer enable values to Table 10.3-2	string	Yes
2	LocationTypeIdentifier	Location Type Identifier	integer	Yes
3	PersonId	User ID	string	Yes
4	MeasurementTime	Last measurement time provided by a device	dateTime	Yes
5	MotionDetectedFlag	Detection flag of motion	boolean	Yes
6	MotionDetectedDelayFlag	Flag showing Motion detection delayed	boolean	Yes
7	TamperDetectedFlag	Detection flag of unauthorized or illegal event for tampering	boolean	Yes

10.5.7.3. Service

Motion Sensor primitive device's services are shown in the following table.

Table 10.5.7.3-1: Motion Sensor primitive device's services

	Service	Description
1	QueryStateVariable	Query Motion Sensor primitive device'e State Variables.
2	GetIcon	Get Icon image of Motion Sensor primitive device

The followings are each service's description.

10.5.7.3.1. QueryStateVariable

(1) Description

Query Motion Sensor primitive device's State Variables.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/MotionSensor/Service/QueryStateVariable

(3) Input parameters

Table 10.5.7.3.1-1: QueryStateVariable Service Input parameters

	Parameter	State Variables	Description
1	LocationType	LocationType	Values SHOULD NOT specified for query.
2	LocationIdentifier	LocationIdentifier	
3	PersonId	PersonId	
4	MeasurementTime	MeasurementTime	
5	MotionDetectedFlag	MotionDetectedFlag	
6	MotionDetectedDelayFlag	MotionDetectedDelayFlag	
7	TamperDetectedFlag	TamperDetectedFlag	

(4) Output parameters

Table 10.5.7.3.1-2: QueryStateVariable Service Output parameters

	Parameter	State Variables	Description
1	LocationType	LocationType	Value of the specified parameter as input SHOULD be included in output.
2	LocationIdentifier	LocationIdentifier	
3	PersonId	PersonId	
4	MeasurementTime	MeasurementTime	
5	MotionDetectedFlag	MotionDetectedFlag	
6	MotionDetectedDelayFlag	MotionDetectedDelayFlag	
7	TamperDetectedFlag	TamperDetectedFlag	

10.5.7.3.2. GetIcon

(1) Description

Obtain an icon image data of a device.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/MotionSensor/Service/GetIcon

(3) Input parameters

Table 10.5.7.3.2-1: GetIcon Service Input parameters

	Parameter	State Variables	Data Type	Description
1	url	-	string	Specify URL of Icon data.

(4) Output parameters

Table 10.5.7.3.2-2: GetIcon Service Output parameters

	Parameter	State Variables	Data Type	Description
1	mimeType	-	string	Specify MIME media type of the icon data.icon data.
2	base64Data	-	base64Binary	Set the icon data encode by BASE 64.

10.5.8. Property Exit Sensor Primitive Sensor

10.5.8.1. Device Type

The Device Type ID (URL form) of a Property Exit Sensor primitive device for detecting person absence is shown below,

http://www.pucc.jp/2012/03/Device/IEEE11073/PropertyExitSensor

10.5.8.2. State Variables

The state varibales of a Property Exit Sensor primitive device is shown in the following table.

Table 10.5.8.2-1: State varibales of a Property Exit Sensor primitive device

	State Variable Name	Description	Data Type	Event
1	LocationType	Location Type Refer enable values to Table 10.3-2	string	Yes
2	LocationTypeIdentifier	Location Type Identifier	integer	Yes
3	PersonId	User ID	string	Yes
4	MeasurementTime	Last measurement time provided by a device	dateTime	Yes
5	OccupantExitPropertyFlag	Detection flag showing that all occupants are absent to property	boolean	Yes
6	DoorLeftOpenFlag	Detection flag of Door lefting open.	boolean	Yes

10.5.8.3. Service

Property Exit Sensor primitive device's services are shown in the following table.

Table 10.5.8.3-1: Property Exit Sensor primitive device's services

	Service	Description
1	QueryStateVariable	Query Property Exit Sensor primitive device's State Variables.
2	GetIcon	Get Icon image of Property Exit Sensor primitive device

The followings are each service's description.

10.5.8.3.1. QueryStateVariable

(1) Description

Query Property Exit Sensor primitive device's State Variables.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/PropertyExitSensor/Service/QueryStateVariable

(3) Input parameters

Table 10.5.8.3.1-1: QueryStateVariable Service Input parameters

	Parameter	State Variables	Description
1	LocationType	LocationType	Values SHOULD NOT specified for query.
2	LocationIdentifier	LocationIdentifier	
3	PersonId	PersonId	
4	MeasurementTime	MeasurementTime	
5	OccupantExitPropertyFlag	OccupantExitPropertyFlag	
6	DoorLeftOpenFlag	DoorLeftOpenFlag	

(4) Output parameters

Table 10.5.8.3.1-2: QueryStateVariable Service Output parameters

	Parameter	State Variables	Description
1	LocationType	LocationType	Value of the specified parameter as input SHOULD be included in output.
2	LocationIdentifier	LocationIdentifier	
3	PersonId	PersonId	
4	MeasurementTime	MeasurementTime	
5	OccupantExitPropertyFlag	OccupantExitPropertyFlag	
6	DoorLeftOpenFlag	DoorLeftOpenFlag	

10.5.8.3.2. GetIcon

(1) Description

Obtain an icon image data of a device.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/PropertyExitSensor/Service/GetIcon

(3) Input parameters

Table 10.5.8.3.2-1: GetIcon Service Input parameters

	Parameter	State Variables	Data Type	Description
1	url	-	string	Specify URL of Icon data.

(4) Output parameters

Table 10.5.8.3.2-2: GetIcon Service Output parameters

	Parameter	State Variables	Data Type	Description
1	mimeType	-	string	Specify MIME media type of the icon data.icon data.
2	base64Data	-	base64Binary	Set the icon data encode by BASE 64.

10.5.9. Enumeresis Sensor Primitive Device

10.5.9.1. Device Type

The Device Type ID (URL form) of an Enumeresis Sensor primitive device is shown below,

http://www.pucc.jp/2012/03/Device/IEEE11073/EnuresisSensor

10.5.9.2. State Variables

The state varibales of an Enumeresis Sensor primitive device is shown in the following table.

Table 10.5.9.2-1: State varibales of a Enumeresis Sensor primitive device

	State Variable Name	Description	Data Type	Event
1	LocationType	Lcation Type Refer enable values to Table 10.3-2	string	Yes
2	LocationTypeIdentifier	Location Type Identifier	integer	Yes
3	PersonId	User ID	string	Yes
4	MeasurementTime	Last measurement time provided by a device	dateTime	Yes
5	EnuresisDetectedFlag	Detection flag of Enuresis	boolean	Yes

10.5.9.3. Service

Enuresis Sensor primitive device's services are shown in the following table.

Table 10.5.9.3-1: Enuresis Sensor primitive device's services

	Service	Description
1	QueryStateVariable	Query Enuresis Sensor primitive device's State Variables.
2	GetIcon	Get Icon image of Enuresis Sensor primitive device

The followings are each service's description.

10.5.9.3.1. QueryStateVariable

(1) Description

Query Enuresis Sensor primitive device's State Variables.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/EnuresisSensor/Service/QueryStateVariable

(3) Input parameters

Table 10.5.9.3.1-1: QueryStateVariable Service Input parameters

	Parameter	State Variables	Description
1	LocationType	LocationType	Values SHOULD NOT specified for query.
2	LocationIdentifier	LocationIdentifier	
3	PersonId	PersonId	
4	MeasurementTime	MeasurementTime	
5	EnuresisDetectedFlag	EnuresisDetectedFlag	

(4) Output parameters

Table 10.5.9.3.1-2: QueryStateVariable Service Output parameters

	Parameter	State Variables	Description
1	LocationType	LocationType	Value of the specified parameter as input SHOULD be included in output.
2	LocationIdentifier	LocationIdentifier	
3	PersonId	PersonId	
4	MeasurementTime	MeasurementTime	
5	EnuresisDetectedFlag	EnuresisDetectedFlag	

10.5.9.3.2. GetIcon

(1) Description

Obtain an icon image data of a device.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/EnuresisSensor/Service/GetIcon

(3) Input parameters

Table 10.5.9.3.2-1: GetIcon Service Input parameters

	Parameter	State Variables	Data Type	Description
1	url	-	string	Specify URL of Icon data.

(4) Output parameters

Table 10.5.9.3.2-2: GetIcon Service Output parameters

	Parameter	State Variables	Data Type	Description
1	mimeType	-	string	Specify MIME media type of the icon data.icon data.
2	base64Data	-	base64Binary	Set the icon data encode by BASE 64.

10.5.10. Contact Closure Sensor Primitive Device

10.5.10.1. Device Type

The Device Type ID (URL form) of a Query Contact Closure Sensor primitive device is shown below,

http://www.pucc.jp/2012/03/Device/IEEE11073/ContactClosureSensor

10.5.10.2. State Variables

The state varibales of a Query Contact Closure Sensor primitive device is shown in the following table.

Table 10.5.10.2-1: State varibales of a Query Contact Closure Sensor primitive device

	State Variable Name	Description	Data Type	Event
1	LocationType	Location Type Refer enable values to Table 10.3-2	string	Yes
2	LocationTypeIdentifier	Location Type Identifier	integer	Yes
3	PersonId	User ID	string	Yes
4	MeasurementTime	Last measurement time provided by a device	dateTime	Yes
5	ContactFlag	Detection flag of contact. Enable values are as follows, "Opened" "Closed"	string	Yes

10.5.10.3. Service

Contact Closure Sensor primitive device's services are shown in the following table.

Table 10.5.10.3-1: Contact Closure Sensor primitive device's

	Service	Description
1	QueryStateVariable	Query Contact Closure Sensor primitive device's State Variables.
2	GetIcon	Get Icon image of Contact Closure Sensor primitive device

The followings are each service's description.

10.5.10.3.1. QueryStateVariable

(1) Description

Query Contact Closure Sensor primitive device's State Variables.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/ContactClosureSensor/Service/QueryStateVariable

(3) Input parameters

Table 10.5.10.3.1-1: QueryStateVariable Service Input parameters

	Parameter	State Variables	Description
1	LocationType	LocationType	Values SHOULD NOT specified for query.
2	LocationIdentifier	LocationIdentifier	
3	PersonId	PersonId	
4	MeasurementTime	MeasurementTime	
5	ContactFlag	ContactFlag	

(4) Output parameters

Table 10.5.10.3.1-2: QueryStateVariable Service Output parameters

	Parameter	State Variables	Description
1	LocationType	LocationType	Value of the specified parameter as input SHOULD be included in output.
2	LocationIdentifier	LocationIdentifier	
3	PersonId	PersonId	
4	MeasurementTime	MeasurementTime	
5	ContactFlag	ContactFlag	

10.5.10.3.2. GetIcon

(1) Description

Obtain an icon image data of a device.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/ContactClosureSensor/Service/GetIcon

(3) Input parameters

Table 10.5.10.3.2-1: GetIcon Service Input parameters

	Parameter	State Variables	Data Type	Description
1	url	-	string	Specify URL of Icon data.

(4) Output parameters

Table 10.5.10.3.2-2: GetIcon Service Output parameters

	Parameter	State Variables	Data Type	Description
1	mimeType	-	string	Specify MIME media type of the icon data.icon data.
2	base64Data	-	base64Binary	Set the icon data encode by BASE 64.

10.5.11. Usage Sensor Primitive Device

10.5.11.1. Device Type

The Device Type ID (URL form) of a Usage Sensor primitive device is shown below,

http://www.pucc.jp/2012/03/Device/IEEE11073/UsageSensor

10.5.11.2. State Variables

The state varibales of a Usage Sensor primitive device is shown in the following table.

Table 10.5.11.2-1: State varibales of a Usage Sensor primitive device

	State Variable Name	Description	Data Type	Event
1	LocationType	Location Type Refer enable values to Table 10.3-2	string	Yes
2	LocationTypeIdentifier	Location Type Identifier	integer	Yes
3	PersonId	User ID	string	Yes
4	MeasurementTime	Last measurement time provided by a device	dateTime	Yes
5	UsageStartedFlag	Flag showing usage started (eg. User goes to bed/ user sits on a chair)	boolean	Yes
6	UsageEndedFlag	Flag showing usage finished (eg. User is out from bed/ user sits up)	boolean	Yes
7	ExpectedUseStartViolationFlag	Flag showing that an expected usage could not start by violation	boolean	Yes
8	ExpectedUseStopViolationFlag	Flag showing that an expected usage could not finish by violation	boolean	Yes
9	AbsenceViolationFlag	Flag showing long user absence during an expected usage.	boolean	Yes

10.5.11.3. Service

Usage Sensor primitive device's services are shown in the following table.

Table 10.5.11.3-1: Usage Sensor primitive device's services

	Service	Description
1	QueryStateVariable	Query Usage Sensor primitive device's State Variables.
2	GetIcon	Get Icon image of Usage Sensor primitive device

The followings are each service's description.

10.5.11.3.1. QueryStateVariable

(1) Description

Query Usage Sensor primitive device's State Variables.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/UsageSensor/Service/QueryStateVariable

(3) Input parameters

Table 10.5.11.3.1-1: QueryStateVariable Service Input parameters

	Parameter	State Variables	Description
1	LocationType	LocationType	Values SHOULD NOT specified for query.
2	LocationIdentifier	LocationIdentifier	
3	PersonId	PersonId	
4	MeasurementTime	MeasurementTime	
5	UsageStartedFlag	UsageStartedFlag	
6	UsageEndedFlag	UsageEndedFlag	
7	ExpectedUseStartViolationFlag	ExpectedUseStartViolationFlag	
8	ExpectedUseStopViolationFlag	ExpectedUseStopViolationFlag	
9	AbsenceViolationFlag	AbsenceViolationFlag	

(4) Output parameters

Table 10.5.11.3.1-2: QueryStateVariable Service Output parameters

	Parameter	State Variables	Description
1	LocationType	LocationType	Value of the specified parameter as input SHOULD be included in output.
2	LocationIdentifier	LocationIdentifier	
3	PersonId	PersonId	
4	MeasurementTime	MeasurementTime	
5	UsageStartedFlag	UsageStartedFlag	
6	UsageEndedFlag	UsageEndedFlag	
7	ExpectedUseStartViolationFlag	ExpectedUseStartViolationFlag	
8	ExpectedUseStopViolationFlag	ExpectedUseStopViolationFlag	
9	AbsenceViolationFlag	AbsenceViolationFlag	

10.5.11.3.2. GetIcon

(1) Description

Obtain an icon image data of a device.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/UsageSensor/Service/GetIcon

(3) Input parameters

Table 10.5.11.3.2-1: GetIcon Service Input parameters

	Parameter	State Variables	Data Type	Description
1	url	-	string	Specify URL of Icon data.

(4) Output parameters

Table 10.5.11.3.2-2: GetIcon Service Output parameters

	Parameter	State Variables	Data Type	Description
1	mimeType	-	string	Specify MIME media type of the icon data.icon data.
2	base64Data	-	base64Binary	Set the icon data encode by BASE 64.

10.5.12. Switch Sensor Primitive Device

10.5.12.1. Device Type

The Device Type ID (URL form) of a Switch Sensor primitive device is shown below,

http://www.pucc.jp/2012/03/Device/IEEE11073/SwitchSensor

10.5.12.2. State Variables

The state varibales of a Switch Sensor primitive device is shown in the following table.

Table 10.5.12.2-1: State varibales of a Switch Sensor primitive device

	State Variable Name	Description	Data Type	Event
1	LocationType	Location Type Refer enable values to Table 10.3-2	string	Yes
2	LocationTypeIdentifier	Location Type Identifier	integer	Yes
3	PersonId	User ID	string	Yes
4	MeasurementTime	Last measurement time provided by a device	dateTime	Yes
5	SwitchFlag	Detection flag of switch. Enable values are as follows, "On" "Off"	string	Yes

10.5.12.3. Service

Switch Sensor primitive device's services are shown in the following table.

Table 10.5.12.3-1: Switch Sensor primitive device's services

	Service	Description
1	QueryStateVariable	Query Switch Sensor primitive device's State Variables.
2	GetIcon	Get Icon image of Switch Sensor primitive device

The followings are each service's description.

10.5.12.3.1. QueryStateVariable

(1) Description

Query Switch Sensor primitive device's State Variables.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/SwitchSensor/Service/QueryStateVariable

(3) Input parameters

Table 10.5.12.3.1-1: QueryStateVariable Service Input parameters

	Parameter	State Variables	Description
1	LocationType	LocationType	Values SHOULD NOT specified for query.
2	LocationIdentifier	LocationIdentifier	
3	PersonId	PersonId	
4	MeasurementTime	MeasurementTime	
5	SwitchFlag	SwitchFlag	

(4) Output parameters

Table 10.5.12.3.1-2: QueryStateVariable Service Output parameters

	Parameter	State Variables	Description
1	LocationType	LocationType	Value of the specified parameter as input SHOULD be included in output.
2	LocationIdentifier	LocationIdentifier	
3	PersonId	PersonId	
4	MeasurementTime	MeasurementTime	
5	SwitchFlag	SwitchFlag	

10.5.12.3.2. GetIcon

(1) Description

Obtain an icon image data of a device.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/SwitchSensor/Service/GetIcon

(3) Input parameters

Table 10.5.12.3.2-1: GetIcon Service Input parameters

	Parameter	State Variables	Data Type	Description
1	url	-	string	Specify URL of Icon data.

(4) Output parameters

Table 10.5.12.3.2-2: GetIcon Service Output parameters

	Parameter	State Variables	Data Type	Description
1	mimeType	-	string	Specify MIME media type of the icon data.icon data.
2	base64Data	-	base64Binary	Set the icon data encode by BASE 64.

10.5.13. Dosage Sensor Primitive Device

10.5.13.1. Device Type

The Device Type ID (URL form) of a Dosage Sensor primitive device is shown below,

http://www.pucc.jp/2012/03/Device/IEEE11073/DosageSensor

10.5.13.2. State Variables

The state varibales of a Dosage Sensor primitive device is shown in the following table.

Table 10.5.13.2-1: State varibales of a Dosage Sensor primitive device

	State Variable Name	Description	Data Type	Event
1	LocationType	Location Type Refer enable values to Table 10.3-2	string	Yes
2	LocationTypeIdentifier	Location Type Identifier	integer	Yes
3	PersonId	User ID	string	Yes
4	MeasurementTime	Last measurement time provided by a device	dateTime	Yes
5	DosageTakenFlag	Detection flag showing that a dosage was taken successfuly	boolean	Yes
6	DosageMissedFlag	Detection flag showing that a dosage was failed	boolean	Yes

10.5.13.3. Service

Dosage Sensor primitive device's services are shown in the following table.

Table 10.5.13.3-1: Dosage Sensor primitive device's services

	Service	Description
1	QueryStateVariable	Query Dosage Sensor primitive device's State Variables.
2	GetIcon	Get Icon image of Dosage Sensor primitive device

The followings are each service's description.

10.5.13.3.1. QueryStateVariable

(1) Description

Query Dosage Sensor primitive device's State Variables.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/DosageSensor/Service/QueryStateVariable

(3) Input parameters

Table 10.5.13.3.1-1: QueryStateVariable Service Input parameters

	Parameter	State Variables	Description
1	LocationType	LocationType	Values SHOULD NOT specified for query.
2	LocationIdentifier	LocationIdentifier	
3	PersonId	PersonId	
4	MeasurementTime	MeasurementTime	
5	DosageTakenFlag	DosageTakenFlag	
6	DosageMissedFlag	DosageMissedFlag	

(4) Output parameters

Table 10.5.13.3.1-2: QueryStateVariable Service Output parameters

	Parameter	State Variables	Description
1	LocationType	LocationType	Value of the specified parameter as input SHOULD be included in output.
2	LocationIdentifier	LocationIdentifier	
3	PersonId	PersonId	
4	MeasurementTime	MeasurementTime	
5	DosageTakenFlag	DosageTakenFlag	
6	DosageMissedFlag	DosageMissedFlag	

10.5.13.3.2. GetIcon

(1) Description

Obtain an icon image data of a device.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/DosageSensor/Service/GetIcon

(3) Input parameters

Table 10.5.13.3.2-1: GetIcon Service Input parameters

	Parameter	State Variables	Data Type	Description
1	url	-	string	Specify URL of Icon data.

(4) Output parameters

Table 10.5.13.3.2-2: GetIcon Service Output parameters

	Parameter	State Variables	Data Type	Description
1	mimeType	-	string	Specify MIME media type of the icon data.icon data.
2	base64Data	-	base64Binary	Set the icon data encode by BASE 64.

10.5.14. Temperature Sensor Primitive Device

10.5.14.1. Device Type

The Device Type ID (URL form) of a Temperature Sensor primitive device is shown below,

http://www.pucc.jp/2012/03/Device/IEEE11073/TemperasureSensor

10.5.14.2. State Variables

The state varibales of a Temperature Sensor primitive device is shown in the following table.

Table 10.5.14.2-1: State varibales of a Temperature Sensor primitive device

	State Variable Name	Description	Data Type	Event
1	LocationType	Location Type Refer enable values to Table 10.3-2	string	Yes
2	LocationTypeIdentifier	Location Type Identifier	integer	Yes
3	PersonId	User ID	string	Yes
4	MeasurementTime	Last measurement time provided by a device	dateTime	Yes
5	HighTemperatureDetectedFlag	Detection flag of high temperature	boolean	Yes
6	LowTemperatureDetectedFlag	Detection flag of low temperature	boolean	Yes
7	RateOfChangeFlag	Detection flag of sudden temperature change	boolean	Yes

10.5.14.3. Service

Temperature Sensor primitive device's services are shown in the following table.

Table 10.5.14.3-1: Temperature Sensor primitive device's services

	Service	Description
1	QueryStateVariable	Query Temperature Sensor primitive device's State Variables.
2	GetIcon	Get Icon image of Temperature Sensor primitive device

The followings are each service's description.

10.5.14.3.1. QueryStateVariable

(1) Description

Query Temperature Sensor primitive device's State Variables.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/TemperatureSensor/Service/QueryStateVariable

(3) Input parameters

Table 10.5.14.3.1-1: QueryStateVariable Service Input parameters

	Parameter	State Variables	Description
1	LocationType	LocationType	Values SHOULD NOT specified for query.
2	LocationIdentifier	LocationIdentifier	
3	PersonId	PersonId	
4	MeasurementTime	MeasurementTime	
5	HighTemperatureDetectedFlag	HighTemperatureDetectedFlag	
6	LowTemperatureDetectedFlag	LowTemperatureDetectedFlag	
7	RateOfChangeFlag	RateOfChangeFlag	

(4) Output parameters

Table 10.5.14.3.1-2: QueryStateVariable Service Output parameters

	Parameter	State Variables	Description
1	LocationType	LocationType	Value of the specified parameter as input SHOULD be included in output.
2	LocationIdentifier	LocationIdentifier	
3	PersonId	PersonId	
4	MeasurementTime	MeasurementTime	
5	HighTemperatureDetectedFlag	HighTemperatureDetectedFlag	
6	LowTemperatureDetectedFlag	LowTemperatureDetectedFlag	
7	RateOfChangeFlag	RateOfChangeFlag	

10.5.14.3.2. GetIcon

(1) Description

Obtain an icon image data of a device.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/TemperatureSensor/Service/GetIcon

(3) Input parameters

Table 10.5.14.3.2-1: GetIcon Service Input parameters

	Parameter	State Variables	Data Type	Description
1	url	-	string	Specify URL of Icon data.

(4) Output parameters

Table 10.5.14.3.2-2: GetIcon Service Output parameters

	Parameter	State Variables	Data Type	Description
1	mimeType	-	string	Specify MIME media type of the icon data.icon data.
2	base64Data	-	base64Binary	Set the icon data encode by BASE 64.

10.6. Meta Data

10.6.1. Device Meta Data

The Independent Living Activity Hub device Meta Data Template is shown in the followings.

Descriptions in Red Itallic Character : show values related to each Independent Living Activity Hub devices.

```
<?xml version="1.0"?>
<Device  type="http://www.pucc.jp/2012/03/Device/IEEE11073/IndependentLivingActivityHub"
  id="global unique ID for this device"  name="short user-friendly title">
  <Specification>
    <URLBase>base URL for all relative URLs</URLBase>
    <Manufacturer>manufacturer name</Manufacturer>
    <ManufacturerURL>URL to manufacturer site</ManufacturerURL>
    <ManufactureDate>date of manufacture</ManufactureDate>
    <ModelDescription>long user-friendly title</ModelDescription>
    <ModelName>model name</ModelName>
    <ModelNumber>model number</ModelNumber>
    <ModelURL>URL to model site</ModelURL>
    <SerialNumber>manufacturer's serial number</SerialNumber>
    <UDN>uuid:UUID</UDN>
    <UPC>Universal Product Code</UPC>
    <IconList>
      <Icon>
        <Mimetype>image/format</Mimetype>
        <Width>horizontal pixels</Width>
        <Height>vertical pixels</Height>
        <Depth>color depth</Depth>
        <Url>URL to icon</Url>
      </Icon>
      XML to declare other icons, if any, go here
      </IconList>
    <SupportedContentList>
        <ContentType>MIME type to Content</ContentType>
    </SupportedContentList>
  </Specification>
  <StateVariableList>
    <StateVariable  name="ProductionSpec"  datatype="array"  sendEvents="no">
      <StateVariable  name="ProdSpecEntry"  datatype="struct"  sendEvents="no">
        <StateVariable  name="SpecType"  datatype="integer"  sendEvents="no"/>
        <StateVariable  name="ComponentId"  datatype="string"  sendEvents="no"/>
        <StateVariable  name="ProdSpec"  datatype="string"  sendEvents="no"/>
      </StateVariable>
    </StateVariable>
```

```
    <StateVariable name="Version" datatype="integer" sendEvents="no"/>
    <StateVariable name="DateAndTime" datatype="dateTime" sendEvents="no"/>
  </StateVariableList>
  <ServiceList>
    <Service name="QueryStateVariable" type="http://www.pucc.jp/2012/03/Device/IEEE11073/
        IndependentLivingActivityHub/Service/QueryStateVariable"/>
    <Service name="SetTime" type="http://www.pucc.jp/2012/03/Device/IEEE11073/
        IndependentLivingActivityHub/Service/SetTime"/>
    <Service name="GetIcon" type="http://www.pucc.jp/2012/03/Device/IEEE11073/
        IndependentLivingActivityHub/Service/GetIcon"/>
  </ServiceList>
  <PrimitiveDeviceList>
    <Device type="http://www.pucc.jp/2012/03/Device/IEEE11073/FallSensor" id="global unique ID for
    this device" name="short user-friendly title">
      <Specification>
        <URLBase>base URL for all relative URLs</URLBase>
        <Manufacturer>manufacturer name</Manufacturer>
        <ManufacturerURL>URL to manufacturer site</ManufacturerURL>
        <ManufactureDate>date of manufacture</ManufactureDate>
        <ModelDescription>long user-friendly title</ModelDescription>
        <ModelName>model name</ModelName>
        <ModelNumber>model number</ModelNumber>
        <ModelURL>URL to model site</ModelURL>
        <SerialNumber>manufacturer's serial number</SerialNumber>
        <UDN>uuid:UUID</UDN>
        <UPC>Universal Product Code</UPC>
        <IconList>
          <Icon>
            <Mimetype>image/format</Mimetype>
            <Width>horizontal pixels</Width>
            <Height>vertical pixels</Height>
            <Depth>color depth</Depth>
            <Url>URL to icon</Url>
          </Icon>
          XML to declare other icons, if any, go here
        </IconList>
        <SupportedContentList>
        <ContentType>MIME type to Content</ContentType>
        </SupportedContentList>
      </Specification>
      <StateVariableList>
        <StateVariable name="LocationType" datatype="string" sendEvents="yes"/>
        <StateVariable name="LocationTypeIdentifier" datatype="integer" sendEvents="yes"/>
        <StateVariable name="PersonId" datatype="string" sendEvents="yes"/>
        <StateVariable name="MeasurementTime" datatype="dateTime" sendEvents="yes"/>
        <StateVariable name="FallDetectedFlag" datatype="dateTime" sendEvents="yes"/>
      </StateVariableList>
```

```
        <ServiceList>
          <Service  name="QueryStateVariable" type="http://www.pucc.jp/2012/03/Device/IEEE11073/
          FallSensor/Service/QueryStateVariable"/>
          <Service  name="GetIcon" type="http://www.pucc.jp/2012/03/Device/IEEE11073/
          FallSensor/Service/GetIcon"/>
        </ServiceList>
        <EventConditionList/>
      </Device>
      <Device  type="http://www.pucc.jp/2012/03/Device/IEEE11073/PERSSensor"  id="global unique ID for
      this device"  name="short user-friendly title">
        <Specification>
          <URLBase>base URL for all relative URLs</URLBase>
          <Manufacturer>manufacturer name</Manufacturer>
          <ManufacturerURL>URL to manufacturer site</ManufacturerURL>
          <ManufactureDate>date of manufacture</ManufactureDate>
          <ModelDescription>long user-friendly title</ModelDescription>
          <ModelName>model name</ModelName>
          <ModelNumber>model number</ModelNumber>
          <ModelURL>URL to model site</ModelURL>
          <SerialNumber>manufacturer's serial number</SerialNumber>
          <UDN>uuid:UUID</UDN>
          <UPC>Universal Product Code</UPC>
          <IconList>
            <Icon>
              <Mimetype>image/format</Mimetype>
              <Width>horizontal pixels</Width>
              <Height>vertical pixels</Height>
              <Depth>color depth</Depth>
              <Url>URL to icon</Url>
            </Icon>
            XML to declare other icons, if any, go here
          </IconList>
          <SupportedContentList>
            <ContentType>MIME type to Content</ContentType>
          </SupportedContentList>
        </Specification>
        <StateVariableList>
          <StateVariable  name="LocationType"  datatype="string"  sendEvents="yes"/>
          <StateVariable  name="LocationTypeIdentifier"  datatype="integer"  sendEvents="yes"/>
          <StateVariable  name="PersonId"  datatype="string"  sendEvents="yes"/>
          <StateVariable  name="MeasurementTime"  datatype="dateTime"  sendEvents="yes"/>
          <StateVariable  name="PERSActivatedFlag"  datatype="dateTime"  sendEvents="yes"/>
        </StateVariableList>
        <ServiceList>
          <Service  name="QueryStateVariable" type="http://www.pucc.jp/2012/03/Device/IEEE11073/
          PERSSensor/Service/QueryStateVariable"/>
          <Service  name="GetIcon" type="http://www.pucc.jp/2012/03/Device/IEEE11073/
```

```
        PERSSensor/Service/GetIcon"/>
    </ServiceList>
    <EventConditionList/>
  </Device>
  <Device  type="http://www.pucc.jp/2012/03/Device/IEEE11073/SmokeSensor"  id="global unique ID for
  this device"  name="short user-friendly title">
    <Specification>
      <URLBase>base URL for all relative URLs</URLBase>
      <Manufacturer>manufacturer name</Manufacturer>
      <ManufacturerURL>URL to manufacturer site</ManufacturerURL>
      <ManufactureDate>date of manufacture</ManufactureDate>
      <ModelDescription>long user-friendly title</ModelDescription>
      <ModelName>model name</ModelName>
      <ModelNumber>model number</ModelNumber>
      <ModelURL>URL to model site</ModelURL>
      <SerialNumber>manufacturer's serial number</SerialNumber>
      <UDN>uuid:UUID</UDN>
      <UPC>Universal Product Code</UPC>
      <IconList>
        <Icon>
          <Mimetype>image/format</Mimetype>
          <Width>horizontal pixels</Width>
          <Height>vertical pixels</Height>
          <Depth>color depth</Depth>
          <Url>URL to icon</Url>
        </Icon>
        XML to declare other icons, if any, go here
      </IconList>
      <SupportedContentList>
        <ContentType>MIME type to Content</ContentType>
      </SupportedContentList>
    </Specification>
    <StateVariableList>
      <StateVariable  name="LocationType"  datatype="string"  sendEvents="yes"/>
      <StateVariable  name="LocationTypeIdentifier"  datatype="integer"  sendEvents="yes"/>
      <StateVariable  name="PersonId"  datatype="string"  sendEvents="yes"/>
      <StateVariable  name="MeasurementTime"  datatype="dateTime"  sendEvents="yes"/>
      <StateVariable  name="ConditionDetectedFlag" datatype="dateTime"  sendEvents="yes"/>
    </StateVariableList>
    <ServiceList>
      <Service  name="QueryStateVariable" type="http://www.pucc.jp/2012/03/Device/IEEE11073/
      SmokeSensor/Service/QueryStateVariable"/>
      <Service  name="GetIcon" type="http://www.pucc.jp/2012/03/Device/IEEE11073/
      SmokeSensor/Service/GetIcon"/>
    </ServiceList>
    <EventConditionList/>
  </Device>
```

```
<Device type="http://www.pucc.jp/2012/03/Device/IEEE11073/COSensor" id="global unique ID for this device" name="short user-friendly title">
  <Specification>
    <URLBase>base URL for all relative URLs</URLBase>
    <Manufacturer>manufacturer name</Manufacturer>
    <ManufacturerURL>URL to manufacturer site</ManufacturerURL>
    <ManufactureDate>date of manufacture</ManufactureDate>
    <ModelDescription>long user-friendly title</ModelDescription>
    <ModelName>model name</ModelName>
    <ModelNumber>model number</ModelNumber>
    <ModelURL>URL to model site</ModelURL>
    <SerialNumber>manufacturer's serial number</SerialNumber>
    <UDN>uuid:UUID</UDN>
    <UPC>Universal Product Code</UPC>
    <IconList>
      <Icon>
        <Mimetype>image/format</Mimetype>
        <Width>horizontal pixels</Width>
        <Height>vertical pixels</Height>
        <Depth>color depth</Depth>
        <Url>URL to icon</Url>
      </Icon>
      XML to declare other icons, if any, go here
    </IconList>
    <SupportedContentList>
      <ContentType>MIME type to Content</ContentType>
    </SupportedContentList>
  </Specification>
  <StateVariableList>
    <StateVariable name="LocationType" datatype="string" sendEvents="yes"/>
    <StateVariable name="LocationTypeIdentifier" datatype="integer" sendEvents="yes"/>
    <StateVariable name="PersonId" datatype="string" sendEvents="yes"/>
    <StateVariable name="MeasurementTime" datatype="dateTime" sendEvents="yes"/>
    <StateVariable name="ConditionDetectedFlag" datatype="dateTime" sendEvents="yes"/>
  </StateVariableList>
  <ServiceList>
    <Service name="QueryStateVariable" type="http://www.pucc.jp/2012/03/Device/IEEE11073/
    COSensor/Service/QueryStateVariable"/>
    <Service name="GetIcon" type="http://www.pucc.jp/2012/03/Device/IEEE11073/
    COSensor/Service/GetIcon"/>
  </ServiceList>
  <EventConditionList/>
</Device>

<Device type="http://www.pucc.jp/2012/03/Device/IEEE11073/WaterSensor" id="global unique ID for this device" name="short user-friendly title">
```

```
    <Specification>
      <URLBase>base URL for all relative URLs</URLBase>
      <Manufacturer>manufacturer name</Manufacturer>
      <ManufacturerURL>URL to manufacturer site</ManufacturerURL>
      <ManufactureDate>date of manufacture</ManufactureDate>
      <ModelDescription>long user-friendly title</ModelDescription>
      <ModelName>model name</ModelName>
      <ModelNumber>model number</ModelNumber>
      <ModelURL>URL to model site</ModelURL>
      <SerialNumber>manufacturer's serial number</SerialNumber>
      <UDN>uuid:UUID</UDN>
      <UPC>Universal Product Code</UPC>
      <IconList>
        <Icon>
          <Mimetype>image/format</Mimetype>
          <Width>horizontal pixels</Width>
          <Height>vertical pixels</Height>
          <Depth>color depth</Depth>
          <Url>URL to icon</Url>
        </Icon>
        XML to declare other icons, if any, go here
      </IconList>
      <SupportedContentList>
        <ContentType>MIME type to Content</ContentType>
      </SupportedContentList>
    </Specification>
    <StateVariableList>
      <StateVariable  name="LocationType"  datatype="string"  sendEvents="yes"/>
      <StateVariable  name="LocationTypeIdentifier"  datatype="integer"  sendEvents="yes"/>
      <StateVariable  name="PersonId"  datatype="string"  sendEvents="yes"/>
      <StateVariable  name="MeasurementTime"  datatype="dateTime"  sendEvents="yes"/>
      <StateVariable  name="ConditionDetectedFlag" datatype="dateTime"  sendEvents="yes"/>
    </StateVariableList>
    <ServiceList>
      <Service  name="QueryStateVariable" type="http://www.pucc.jp/2012/03/Device/IEEE11073/
      WaterSensor/Service/QueryStateVariable"/>
      <Service  name="GetIcon" type="http://www.pucc.jp/2012/03/Device/IEEE11073/
      WaterSensor/Service/GetIcon"/>
    </ServiceList>
    <EventConditionList/>
  </Device>
  <Device  type="http://www.pucc.jp/2012/03/Device/IEEE11073/GasSensor"  id="global unique ID for
  this device"  name="short user-friendly title">
    <Specification>
      <URLBase>base URL for all relative URLs</URLBase>
      <Manufacturer>manufacturer name</Manufacturer>
      <ManufacturerURL>URL to manufacturer site</ManufacturerURL>
```

```
            <ManufactureDate>date of manufacture</ManufactureDate>
            <ModelDescription>long user-friendly title</ModelDescription>
            <ModelName>model name</ModelName>
            <ModelNumber>model number</ModelNumber>
            <ModelURL>URL to model site</ModelURL>
            <SerialNumber>manufacturer's serial number</SerialNumber>
            <UDN>uuid:UUID</UDN>
            <UPC>Universal Product Code</UPC>
            <IconList>
              <Icon>
                <Mimetype>image/format</Mimetype>
                <Width>horizontal pixels</Width>
                <Height>vertical pixels</Height>
                <Depth>color depth</Depth>
                <Url>URL to icon</Url>
              </Icon>
              XML to declare other icons, if any, go here
            </IconList>
            <SupportedContentList>
              <ContentType>MIME type to Content</ContentType>
            </SupportedContentList>
          </Specification>
          <StateVariableList>
            <StateVariable  name="LocationType"  datatype="string"  sendEvents="yes"/>
            <StateVariable  name="LocationTypeIdentifier"  datatype="integer"  sendEvents="yes"/>
            <StateVariable  name="PersonId"  datatype="string"  sendEvents="yes"/>
            <StateVariable  name="MeasurementTime"  datatype="dateTime"  sendEvents="yes"/>
            <StateVariable  name="ConditionDetectedFlag" datatype="dateTime"  sendEvents="yes"/>
          </StateVariableList>
          <ServiceList>
            <Service  name="QueryStateVariable" type="http://www.pucc.jp/2012/03/Device/IEEE11073/
            GasSensor/Service/QueryStateVariable"/>
            <Service  name="GetIcon" type="http://www.pucc.jp/2012/03/Device/IEEE11073/
            GasSensor/Service/GetIcon"/>
          </ServiceList>
          <EventConditionList/>
        </Device>
        <Device  type="http://www.pucc.jp/2012/03/Device/IEEE11073/MotionSensor"  id="global unique ID for
        this device"  name="short user-friendly title">
          <Specification>
            <URLBase>base URL for all relative URLs</URLBase>
            <Manufacturer>manufacturer name</Manufacturer>
            <ManufacturerURL>URL to manufacturer site</ManufacturerURL>
            <ManufactureDate>date of manufacture</ManufactureDate>
            <ModelDescription>long user-friendly title</ModelDescription>
            <ModelName>model name</ModelName>
            <ModelNumber>model number</ModelNumber>
```



```
        <ModelURL>URL to model site</ModelURL>
        <SerialNumber>manufacturer's serial number</SerialNumber>
        <UDN>uuid:UUID</UDN>
        <UPC>Universal Product Code</UPC>
        <IconList>
          <Icon>
            <Mimetype>image/format</Mimetype>
            <Width>horizontal pixels</Width>
            <Height>vertical pixels</Height>
            <Depth>color depth</Depth>
            <Url>URL to icon</Url>
          </Icon>
          XML to declare other icons, if any, go here
        </IconList>
        <SupportedContentList>
          <ContentType>MIME type to Content</ContentType>
        </SupportedContentList>
      </Specification>
      <StateVariableList>
        <StateVariable  name="LocationType"  datatype="string"  sendEvents="yes"/>
        <StateVariable  name="LocationTypeIdentifier"  datatype="integer"  sendEvents="yes"/>
        <StateVariable  name="PersonId"  datatype="string"  sendEvents="yes"/>
        <StateVariable  name="MeasurementTime"  datatype="dateTime"  sendEvents="yes"/>
        <StateVariable  name="MotionDetectedFlag" datatype="dateTime"  sendEvents="yes"/>
        <StateVariable  name=" MotionDetectedDelayFlag " datatype="dateTime"  sendEvents="yes"/>
        <StateVariable  name="TamperDetectedFlag" datatype="dateTime"  sendEvents="yes"/>
      </StateVariableList>
      <ServiceList>
        <Service  name="QueryStateVariable" type="http://www.pucc.jp/2012/03/Device/IEEE11073/
        MotionSensor/Service/QueryStateVariable"/>
        <Service  name="GetIcon" type="http://www.pucc.jp/2012/03/Device/IEEE11073/
        MotionSensor/Service/GetIcon"/>
      </ServiceList>
      <EventConditionList/>
    </Device>

    <Device  type="http://www.pucc.jp/2012/03/Device/IEEE11073/PropertyExitSensor"  id="global unique
    ID for this device"  name="short user-friendly title">
      <Specification>
        <URLBase>base URL for all relative URLs</URLBase>
        <Manufacturer>manufacturer name</Manufacturer>
        <ManufacturerURL>URL to manufacturer site</ManufacturerURL>
        <ManufactureDate>date of manufacture</ManufactureDate>
        <ModelDescription>long user-friendly title</ModelDescription>
        <ModelName>model name</ModelName>
        <ModelNumber>model number</ModelNumber>
        <ModelURL>URL to model site</ModelURL>
```

```
            <SerialNumber>manufacturer's serial number</SerialNumber>
            <UDN>uuid:UUID</UDN>
            <UPC>Universal Product Code</UPC>
            <IconList>
              <Icon>
                <Mimetype>image/format</Mimetype>
                <Width>horizontal pixels</Width>
                <Height>vertical pixels</Height>
                <Depth>color depth</Depth>
                <Url>URL to icon</Url>
              </Icon>
              XML to declare other icons, if any, go here
            </IconList>
            <SupportedContentList>
              <ContentType>MIME type to Content</ContentType>
            </SupportedContentList>
          </Specification>
          <StateVariableList>
            <StateVariable  name="LocationType"  datatype="string"  sendEvents="yes"/>
            <StateVariable  name="LocationTypeIdentifier"  datatype="integer"  sendEvents="yes"/>
            <StateVariable  name="PersonId"  datatype="string"  sendEvents="yes"/>
            <StateVariable  name="MeasurementTime"  datatype="dateTime"  sendEvents="yes"/>
            <StateVariable  name="OccupantExitPropertyFlag" datatype="dateTime"  sendEvents="yes"/>
            <StateVariable  name="DoorLeftOpenFlag" datatype="dateTime"  sendEvents="yes"/>
          </StateVariableList>
          <ServiceList>
            <Service  name="QueryStateVariable" type="http://www.pucc.jp/2012/03/Device/IEEE11073/
            PropertyExitSensor/Service/QueryStateVariable"/>
            <Service  name="GetIcon" type="http://www.pucc.jp/2012/03/Device/IEEE11073/
            PropertyExitSensor/Service/GetIcon"/>
          </ServiceList>
          <EventConditionList/>
        </Device>

        <Device  type="http://www.pucc.jp/2012/03/Device/IEEE11073/EnuresisSensor"  id="global unique ID
        for this device"  name="short user-friendly title">
          <Specification>
            <URLBase>base URL for all relative URLs</URLBase>
            <Manufacturer>manufacturer name</Manufacturer>
            <ManufacturerURL>URL to manufacturer site</ManufacturerURL>
            <ManufactureDate>date of manufacture</ManufactureDate>
            <ModelDescription>long user-friendly title</ModelDescription>
            <ModelName>model name</ModelName>
            <ModelNumber>model number</ModelNumber>
            <ModelURL>URL to model site</ModelURL>
            <SerialNumber>manufacturer's serial number</SerialNumber>
            <UDN>uuid:UUID</UDN>
```

```
            <UPC>Universal Product Code</UPC>
            <IconList>
              <Icon>
                <Mimetype>image/format</Mimetype>
                <Width>horizontal pixels</Width>
                <Height>vertical pixels</Height>
                <Depth>color depth</Depth>
                <Url>URL to icon</Url>
              </Icon>
              XML to declare other icons, if any, go here
            </IconList>
            <SupportedContentList>
              <ContentType>MIME type to Content</ContentType>
            </SupportedContentList>
        </Specification>
        <StateVariableList>
            <StateVariable  name="LocationType"  datatype="string"  sendEvents="yes"/>
            <StateVariable  name="LocationTypeIdentifier"  datatype="integer"  sendEvents="yes"/>
            <StateVariable  name="PersonId"  datatype="string"  sendEvents="yes"/>
            <StateVariable  name="MeasurementTime"  datatype="dateTime"  sendEvents="yes"/>
            <StateVariable  name="EnuresisDetectedFlag" datatype="dateTime"  sendEvents="yes"/>
        </StateVariableList>
        <ServiceList>
            <Service  name="QueryStateVariable" type="http://www.pucc.jp/2012/03/Device/IEEE11073/
            EnuresisSensor/Service/QueryStateVariable"/>
            <Service  name="GetIcon" type="http://www.pucc.jp/2012/03/Device/IEEE11073/
            EnuresisSensor/Service/GetIcon"/>
        </ServiceList>
        <EventConditionList/>
    </Device>

    <Device  type="http://www.pucc.jp/2012/03/Device/IEEE11073/ContactClosureSensor"  id="global
    unique ID for this device"  name="short user-friendly title">
        <Specification>
            <URLBase>base URL for all relative URLs</URLBase>
            <Manufacturer>manufacturer name</Manufacturer>
            <ManufacturerURL>URL to manufacturer site</ManufacturerURL>
            <ManufactureDate>date of manufacture</ManufactureDate>
            <ModelDescription>long user-friendly title</ModelDescription>
            <ModelName>model name</ModelName>
            <ModelNumber>model number</ModelNumber>
            <ModelURL>URL to model site</ModelURL>
            <SerialNumber>manufacturer's serial number</SerialNumber>
            <UDN>uuid:UUID</UDN>
            <UPC>Universal Product Code</UPC>
            <IconList>
              <Icon>
```

```
            <Mimetype>image/format</Mimetype>
            <Width>horizontal pixels</Width>
            <Height>vertical pixels</Height>
            <Depth>color depth</Depth>
            <Url>URL to icon</Url>
          </Icon>
          XML to declare other icons, if any, go here
        </IconList>
        <SupportedContentList>
          <ContentType>MIME type to Content</ContentType>
        </SupportedContentList>
      </Specification>
      <StateVariableList>
        <StateVariable  name="LocationType"  datatype="string"  sendEvents="yes"/>
        <StateVariable  name="LocationTypeIdentifier"  datatype="integer"  sendEvents="yes"/>
        <StateVariable  name="PersonId"  datatype="string"  sendEvents="yes"/>
        <StateVariable  name="MeasurementTime"  datatype="dateTime"  sendEvents="yes"/>
        <StateVariable  name="ContactFlag" datatype="dateTime"  sendEvents="yes"/>
          <AllowedValueList>
            <AllowedValue>Open</AllowedValue>
            <AllowedValue>Close</AllowedValue>
          </AllowedValueList>
        </StateVariable>
      </StateVariableList>
      <ServiceList>
        <Service  name="QueryStateVariable" type="http://www.pucc.jp/2012/03/Device/IEEE11073/
        ContactClosureSensor/Service/QueryStateVariable"/>
        <Service  name="GetIcon" type="http://www.pucc.jp/2012/03/Device/IEEE11073/
        ContactClosureSensor/Service/GetIcon"/>
      </ServiceList>
      <EventConditionList/>
    </Device>

    <Device  type="http://www.pucc.jp/2012/03/Device/IEEE11073/UsageSensor"  id="global unique ID for
    this device"  name="short user-friendly title">
      <Specification>
        <URLBase>base URL for all relative URLs</URLBase>
        <Manufacturer>manufacturer name</Manufacturer>
        <ManufacturerURL>URL to manufacturer site</ManufacturerURL>
        <ManufactureDate>date of manufacture</ManufactureDate>
        <ModelDescription>long user-friendly title</ModelDescription>
        <ModelName>model name</ModelName>
        <ModelNumber>model number</ModelNumber>
        <ModelURL>URL to model site</ModelURL>
        <SerialNumber>manufacturer's serial number</SerialNumber>
        <UDN>uuid:UUID</UDN>
        <UPC>Universal Product Code</UPC>
```

```
        <IconList>
          <Icon>
            <Mimetype>image/format</Mimetype>
            <Width>horizontal pixels</Width>
            <Height>vertical pixels</Height>
            <Depth>color depth</Depth>
            <Url>URL to icon</Url>
          </Icon>
          XML to declare other icons, if any, go here
        </IconList>
        <SupportedContentList>
          <ContentType>MIME type to Content</ContentType>
        </SupportedContentList>
      </Specification>
      <StateVariableList>
        <StateVariable  name="LocationType"  datatype="string"  sendEvents="yes"/>
        <StateVariable  name="LocationTypeIdentifier"  datatype="integer"  sendEvents="yes"/>
        <StateVariable  name="PersonId"  datatype="string"  sendEvents="yes"/>
        <StateVariable  name="MeasurementTime"  datatype="dateTime"  sendEvents="yes"/>
        <StateVariable  name="UsageStartedFlag" datatype="dateTime"  sendEvents="yes"/>
        <StateVariable  name="UsageEndedFlag" datatype="dateTime"  sendEvents="yes"/>
        <StateVariable  name="ExpectedUseStartViolationFlag" datatype="dateTime"  sendEvents="yes"/>
        <StateVariable  name="ExpectedUseStopViolationFlag" datatype="dateTime"  sendEvents="yes"/>
        <StateVariable  name="AbsenceViolationFlag" datatype="dateTime"  sendEvents="yes"/>
      </StateVariableList>
      <ServiceList>
        <Service  name="QueryStateVariable" type="http://www.pucc.jp/2012/03/Device/IEEE11073/
        UsageSensor/Service/QueryStateVariable"/>
        <Service  name="GetIcon" type="http://www.pucc.jp/2012/03/Device/IEEE11073/
        UsageSensor/Service/GetIcon"/>
      </ServiceList>
      <EventConditionList/>
    </Device>

    <Device  type="http://www.pucc.jp/2012/03/Device/IEEE11073/SwitchSensor"  id="global unique ID for
    this device"  name="short user-friendly title">
      <Specification>
        <URLBase>base URL for all relative URLs</URLBase>
        <Manufacturer>manufacturer name</Manufacturer>
        <ManufacturerURL>URL to manufacturer site</ManufacturerURL>
        <ManufactureDate>date of manufacture</ManufactureDate>
        <ModelDescription>long user-friendly title</ModelDescription>
        <ModelName>model name</ModelName>
        <ModelNumber>model number</ModelNumber>
        <ModelURL>URL to model site</ModelURL>
        <SerialNumber>manufacturer's serial number</SerialNumber>
        <UDN>uuid:UUID</UDN>
```

```
        <UPC>Universal Product Code</UPC>
        <IconList>
          <Icon>
            <Mimetype>image/format</Mimetype>
            <Width>horizontal pixels</Width>
            <Height>vertical pixels</Height>
            <Depth>color depth</Depth>
            <Url>URL to icon</Url>
          </Icon>
          XML to declare other icons, if any, go here
        </IconList>
        <SupportedContentList>
          <ContentType>MIME type to Content</ContentType>
        </SupportedContentList>
      </Specification>
      <StateVariableList>
        <StateVariable  name="LocationType"  datatype="string"  sendEvents="yes"/>
        <StateVariable  name="LocationTypeIdentifier"  datatype="integer"  sendEvents="yes"/>
        <StateVariable  name="PersonId"  datatype="string"  sendEvents="yes"/>
        <StateVariable  name="MeasurementTime"  datatype="dateTime"  sendEvents="yes"/>
        <StateVariable  name="SwitchFlag" datatype="dateTime"  sendEvents="yes"/>
          <AllowedValueList>
            <AllowedValue>On</AllowedValue>
            <AllowedValue>Off</AllowedValue>
          </AllowedValueList>
        </StateVariable>
      </StateVariableList>
      <ServiceList>
        <Service  name="QueryStateVariable" type="http://www.pucc.jp/2012/03/Device/IEEE11073/
        SwitchSensor/Service/QueryStateVariable"/>
        <Service  name="GetIcon" type="http://www.pucc.jp/2012/03/Device/IEEE11073/
        SwitchSensor/Service/GetIcon"/>
      </ServiceList>
      <EventConditionList/>
    </Device>

    <Device  type="http://www.pucc.jp/2012/03/Device/IEEE11073/MedicationDosageSensor"  id="global
    unique ID for this device"  name="short user-friendly title">
      <Specification>
        <URLBase>base URL for all relative URLs</URLBase>
        <Manufacturer>manufacturer name</Manufacturer>
        <ManufacturerURL>URL to manufacturer site</ManufacturerURL>
        <ManufactureDate>date of manufacture</ManufactureDate>
        <ModelDescription>long user-friendly title</ModelDescription>
        <ModelName>model name</ModelName>
        <ModelNumber>model number</ModelNumber>
        <ModelURL>URL to model site</ModelURL>
```

```
        <SerialNumber>manufacturer's serial number</SerialNumber>
        <UDN>uuid:UUID</UDN>
        <UPC>Universal Product Code</UPC>
        <IconList>
          <Icon>
            <Mimetype>image/format</Mimetype>
            <Width>horizontal pixels</Width>
            <Height>vertical pixels</Height>
            <Depth>color depth</Depth>
            <Url>URL to icon</Url>
          </Icon>
          XML to declare other icons, if any, go here
        </IconList>
        <SupportedContentList>
          <ContentType>MIME type to Content</ContentType>
        </SupportedContentList>
      </Specification>
      <StateVariableList>
        <StateVariable  name="LocationType"  datatype="string"  sendEvents="yes"/>
        <StateVariable  name="LocationTypeIdentifier"  datatype="integer"  sendEvents="yes"/>
        <StateVariable  name="PersonId"  datatype="string"  sendEvents="yes"/>
        <StateVariable  name="MeasurementTime"  datatype="dateTime"  sendEvents="yes"/>
        <StateVariable  name="DosageTakenFlag" datatype="dateTime"  sendEvents="yes"/>
        <StateVariable  name="DosageMissedFlag" datatype="dateTime"  sendEvents="yes"/>
      </StateVariableList>
      <ServiceList>
        <Service  name="QueryStateVariable" type="http://www.pucc.jp/2012/03/Device/IEEE11073/
        MedicationDosageSensor/Service/QueryStateVariable"/>
        <Service  name="GetIcon" type="http://www.pucc.jp/2012/03/Device/IEEE11073/
        MedicationDosageSensor/Service/GetIcon"/>
      </ServiceList>
      <EventConditionList/>
    </Device>

    <Device  type="http://www.pucc.jp/2012/03/Device/IEEE11073/TemperatureSensor"  id="global unique
    ID for this device"  name="short user-friendly title">
      <Specification>
        <URLBase>base URL for all relative URLs</URLBase>
        <Manufacturer>manufacturer name</Manufacturer>
        <ManufacturerURL>URL to manufacturer site</ManufacturerURL>
        <ManufactureDate>date of manufacture</ManufactureDate>
        <ModelDescription>long user-friendly title</ModelDescription>
        <ModelName>model name</ModelName>
        <ModelNumber>model number</ModelNumber>
        <ModelURL>URL to model site</ModelURL>
        <SerialNumber>manufacturer's serial number</SerialNumber>
        <UDN>uuid:UUID</UDN>
```

```
            <UPC>Universal Product Code</UPC>
            <IconList>
              <Icon>
                <Mimetype>image/format</Mimetype>
                <Width>horizontal pixels</Width>
                <Height>vertical pixels</Height>
                <Depth>color depth</Depth>
                <Url>URL to icon</Url>
              </Icon>
              XML to declare other icons, if any, go here
            </IconList>
            <SupportedContentList>
              <ContentType>MIME type to Content</ContentType>
            </SupportedContentList>
          </Specification>
          <StateVariableList>
            <StateVariable  name="LocationType"  datatype="string"  sendEvents="yes"/>
            <StateVariable  name="LocationTypeIdentifier"  datatype="integer"  sendEvents="yes"/>
            <StateVariable  name="PersonId"  datatype="string"  sendEvents="yes"/>
            <StateVariable  name="MeasurementTime"  datatype="dateTime"  sendEvents="yes"/>
            <StateVariable  name="HighTemperatureDetectedFlag" datatype="dateTime"  sendEvents="yes"/>
            <StateVariable  name="LowTemperatureDetectedFlag" datatype="dateTime"  sendEvents="yes"/>
            <StateVariable  name="RateOfChangeFlag" datatype="dateTime"  sendEvents="yes"/>
          </StateVariableList>
          <ServiceList>
            <Service  name="QueryStateVariable" type="http://www.pucc.jp/2012/03/Device/IEEE11073/
            TemperatureSensor/Service/QueryStateVariable"/>
            <Service  name="GetIcon" type="http://www.pucc.jp/2012/03/Device/IEEE11073/
            TemperatureSensor/Service/GetIcon"/>
          </ServiceList>
          <EventConditionList/>
        </Device>
      </PrimitiveDeviceList>
      <EventConditionList/>
</Device>
```

10.6.2. Service Meta Data

The Service Meta Data Template of Independent Living Activity Hub device is shown in the followings.

(1)QueryStateVariable Service Meta Data

```
<?xml version="1.0" ?>
<Service name="QueryStateVariable" type="http://www.pucc.jp/2012/03/Device/
   IEEE11073/IndependentLivingActivityHub/Service/QueryStateVariable">
   <InputParameterList>
      <Parameter    name="ProductionSpec"    relatedStateVariable="ProductionSpec">
       <Parameter    name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
         <Parameter    name="SpecType" relatedStateVariable="SpecType"/>
         <Parameter    name="ComponentId" relatedStateVariable="ComponentId"/>
         <Parameter    name="ProdSpec"/>
       </Parameter>
      </Parameter>
      <Parameter name="Version" relatedStateVariable ="Version"/>
      <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
      <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
      <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
      <Parameter name="FallDetectedFlag" relatedStateVariable ="FallDetectedFlag"/>
   </InputParameterList>
   <OutputParameterList>
      <Parameter    name="ProductionSpec"    relatedStateVariable="ProductionSpec">
       <Parameter    name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
         <Parameter    name="SpecType" relatedStateVariable="SpecType"/>
         <Parameter    name="ComponentId" relatedStateVariable="ComponentId"/>
         <Parameter    name="ProdSpec"/>
       </Parameter>
      </Parameter>
      <Parameter name="Version" relatedStateVariable ="Version"/>
      <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
      <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
      <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
      <Parameter name="FallDetectedFlag" relatedStateVariable ="FallDetectedFlag"/>
   </OutputParameterList>
</Service>
```

(2)SetTime Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon"type="http://www.pucc.jp/2012/03/Device/IEEE11073/IndependentLivingActivityHub/
  Service/SetTime">
  <InputParameterList>
    <Parameter name="dateAndTime" relatedStateVariable="DateAndTime"/>
  </InputParameterList>
  <OutputParameterList/>
</Service>
```

(3)GetIcon Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon" type="http://www.pucc.jp/2012/03/Device/IEEE11073/IndependentLivingActivityHub/
  Service/GetIcon">
  <InputParameterList>
    <Parameter name="url" datatype="string"/>
  </InputParameterList>
  <OutputParameterList>
    <Parameter name="mimeType" datatype="string"/>
    <Parameter name="base64Data" datatype="base64Binary"/>
  </OutputParameterList>
</Service>
```

The Fall Sensor primitive device Service Meta Data Template is shown in the followings.

(1)QueryStateVariable Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon"
   type="http://www.pucc.jp/2012/03/Device/IEEE11073/FallSensor/Service/QueryStateVariable">
   <InputParameterList>
      <Parameter    name="ProductionSpec"    relatedStateVariable="ProductionSpec">
       <Parameter    name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
         <Parameter    name="SpecType" relatedStateVariable="SpecType"/>
         <Parameter    name="ComponentId" relatedStateVariable="ComponentId"/>
         <Parameter    name="ProdSpec"/>
       </Parameter>
      </Parameter>
      <Parameter name="Version" relatedStateVariable ="Version"/>
      <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
      <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
      <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
      <Parameter name="FallDetectedFlag" relatedStateVariable ="FallDetectedFlag"/>
   </InputParameterList>
   <OutputParameterList>
      <Parameter    name="ProductionSpec"    relatedStateVariable="ProductionSpec">
       <Parameter    name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
         <Parameter    name="SpecType" relatedStateVariable="SpecType"/>
         <Parameter    name="ComponentId" relatedStateVariable="ComponentId"/>
         <Parameter    name="ProdSpec"/>
       </Parameter>
      </Parameter>
      <Parameter name="Version" relatedStateVariable ="Version"/>
      <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
      <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
      <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
      <Parameter name="FallDetectedFlag" relatedStateVariable ="FallDetectedFlag"/>
   </OutputParameterList>
</Service>
```

(2)GetIcon Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon" type="http://www.pucc.jp/2012/03/Device/IEEE11073/FallSensor/Service/GetIcon">
  <InputParameterList>
    <Parameter name="url" datatype="string"/>
  </InputParameterList>
  <OutputParameterList>
    <Parameter name="mimeType" datatype="string"/>
    <Parameter name="base64Data" datatype="base64Binary"/>
  </OutputParameterList>
</Service>
```

The PERS Sensor primitive device Service Meta Data Template is shown in the followings.

(1)QueryStateVariable Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon"
  type="http://www.pucc.jp/2012/03/Device/IEEE11073/PERSSensor/Service/QueryStateVariable">
  <InputParameterList>
    <Parameter  name="ProductionSpec"  relatedStateVariable="ProductionSpec">
      <Parameter  name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
        <Parameter  name="SpecType" relatedStateVariable="SpecType"/>
        <Parameter  name="ComponentId" relatedStateVariable="ComponentId"/>
        <Parameter  name="ProdSpec"/>
      </Parameter>
    </Parameter>
    <Parameter name="Version" relatedStateVariable ="Version"/>
    <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
    <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
    <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
    <Parameter name="PERSActivatedFlag" relatedStateVariable ="PERSActivatedFlag"/>
  </InputParameterList>
  <OutputParameterList>
    <Parameter  name="ProductionSpec"  relatedStateVariable="ProductionSpec">
      <Parameter  name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
        <Parameter  name="SpecType" relatedStateVariable="SpecType"/>
        <Parameter  name="ComponentId" relatedStateVariable="ComponentId"/>
        <Parameter  name="ProdSpec"/>
      </Parameter>
    </Parameter>
    <Parameter name="Version" relatedStateVariable ="Version"/>
    <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
    <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
    <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
```

```
    <Parameter name="PERSActivatedFlag" relatedStateVariable ="PERSActivatedFlag"/>
</OutputParameterList>
</Service>
```

(2)GetIcon Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon" type="http://www.pucc.jp/2012/03/Device/IEEE11073/PERSSensor/Service/GetIcon">
  <InputParameterList>
    <Parameter name="url" datatype="string"/>
  </InputParameterList>
  <OutputParameterList>
    <Parameter name="mimeType" datatype="string"/>
    <Parameter name="base64Data" datatype="base64Binary"/>
  </OutputParameterList>
</Service>
```

The Smoke Sensor primitive device Service Meta Data Template is shown in the followings.

(1)QueryStateVariable Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon"
  type="http://www.pucc.jp/2012/03/Device/IEEE11073/SmokeSensor/Service/QueryStateVariable">
  <InputParameterList>
    <Parameter  name="ProductionSpec"  relatedStateVariable="ProductionSpec">
      <Parameter  name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
        <Parameter  name="SpecType" relatedStateVariable="SpecType"/>
        <Parameter  name="ComponentId" relatedStateVariable="ComponentId"/>
        <Parameter  name="ProdSpec"/>
      </Parameter>
    </Parameter>
    <Parameter name="Version" relatedStateVariable ="Version"/>
    <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
    <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
    <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
    <Parameter name="ConditionDetectedFlag" relatedStateVariable ="ConditionDetectedFlag"/>
  </InputParameterList>
  <OutputParameterList>
    <Parameter  name="ProductionSpec"  relatedStateVariable="ProductionSpec">
      <Parameter  name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
        <Parameter  name="SpecType" relatedStateVariable="SpecType"/>
        <Parameter  name="ComponentId" relatedStateVariable="ComponentId"/>
        <Parameter  name="ProdSpec"/>
      </Parameter>
```

```
      </Parameter>
      <Parameter name="Version" relatedStateVariable ="Version"/>
      <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
      <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
      <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
      <Parameter name="ConditionDetectedFlag" relatedStateVariable ="ConditionDetectedFlag"/>
</OutputParameterList>
</Service>
```

(2)GetIcon Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon" type="http://www.pucc.jp/2012/03/Device/IEEE11073/SmokeSensor/Service/
   GetIcon">
   <InputParameterList>
      <Parameter name="url" datatype="string"/>
   </InputParameterList>
   <OutputParameterList>
      <Parameter name="mimeType" datatype="string"/>
      <Parameter name="base64Data" datatype="base64Binary"/>
   </OutputParameterList>
</Service>
```

The CO Sensor primitive device Service Meta Data Template is shown in the followings.

(1)QueryStateVariable Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon"
   type="http://www.pucc.jp/2012/03/Device/IEEE11073/COSensor/Service/QueryStateVariable">
   <InputParameterList>
      <Parameter    name="ProductionSpec"    relatedStateVariable="ProductionSpec">
        <Parameter    name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
          <Parameter    name="SpecType" relatedStateVariable="SpecType"/>
          <Parameter    name="ComponentId" relatedStateVariable="ComponentId"/>
          <Parameter    name="ProdSpec"/>
        </Parameter>
      </Parameter>
      <Parameter name="Version" relatedStateVariable ="Version"/>
      <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
      <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
      <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
      <Parameter name="ConditionDetectedFlag" relatedStateVariable ="ConditionDetectedFlag"/>
   </InputParameterList>
   <OutputParameterList>
```

```
      <Parameter    name="ProductionSpec"    relatedStateVariable="ProductionSpec">
       <Parameter    name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
         <Parameter    name="SpecType" relatedStateVariable="SpecType"/>
         <Parameter    name="ComponentId" relatedStateVariable="ComponentId"/>
         <Parameter    name="ProdSpec"/>
       </Parameter>
      </Parameter>
      <Parameter name="Version" relatedStateVariable ="Version"/>
      <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
      <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
      <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
      <Parameter name="ConditionDetectedFlag" relatedStateVariable ="ConditionDetectedFlag"/>
</OutputParameterList>
</Service>
```

(2)GetIcon Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon" type="http://www.pucc.jp/2012/03/Device/IEEE11073/COSensor/Service/GetIcon">
   <InputParameterList>
      <Parameter name="url" datatype="string"/>
   </InputParameterList>
   <OutputParameterList>
      <Parameter name="mimeType" datatype="string"/>
      <Parameter name="base64Data" datatype="base64Binary"/>
   </OutputParameterList>
</Service>
```

The Water Sensor primitive device Service Meta Data Template is shown in the followings.

(1)QueryStateVariable Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon"
   type="http://www.pucc.jp/2012/03/Device/IEEE11073/WaterSensor/Service/QueryStateVariable">
   <InputParameterList>
      <Parameter    name="ProductionSpec"    relatedStateVariable="ProductionSpec">
       <Parameter    name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
         <Parameter    name="SpecType" relatedStateVariable="SpecType"/>
         <Parameter    name="ComponentId" relatedStateVariable="ComponentId"/>
         <Parameter    name="ProdSpec"/>
       </Parameter>
      </Parameter>
      <Parameter name="Version" relatedStateVariable ="Version"/>
      <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
```

```
      <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
      <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
      <Parameter name="ConditionDetectedFlag" relatedStateVariable ="ConditionDetectedFlag"/>
   </InputParameterList>
   <OutputParameterList>
      <Parameter    name="ProductionSpec"    relatedStateVariable="ProductionSpec">
        <Parameter    name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
          <Parameter    name="SpecType" relatedStateVariable="SpecType"/>
          <Parameter    name="ComponentId" relatedStateVariable="ComponentId"/>
          <Parameter    name="ProdSpec"/>
        </Parameter>
      </Parameter>
      <Parameter name="Version" relatedStateVariable ="Version"/>
      <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
      <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
      <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
      <Parameter name="ConditionDetectedFlag" relatedStateVariable ="ConditionDetectedFlag"/>
</OutputParameterList>
</Service>
```

(2)GetIcon Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon" type="http://www.pucc.jp/2012/03/Device/IEEE11073/WaterSensor/Service/GetIcon">
   <InputParameterList>
      <Parameter name="url" datatype="string"/>
   </InputParameterList>
   <OutputParameterList>
      <Parameter name="mimeType" datatype="string"/>
      <Parameter name="base64Data" datatype="base64Binary"/>
   </OutputParameterList>
</Service>
```

The Gas Sensor primitive device Service Meta Data Template is shown in the followings.

(1)QueryStateVariable Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon"
   type="http://www.pucc.jp/2012/03/Device/IEEE11073/GasSensor/Service/QueryStateVariable">
   <InputParameterList>
      <Parameter    name="ProductionSpec"    relatedStateVariable="ProductionSpec">
        <Parameter    name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
          <Parameter    name="SpecType" relatedStateVariable="SpecType"/>
          <Parameter    name="ComponentId" relatedStateVariable="ComponentId"/>
          <Parameter    name="ProdSpec"/>
        </Parameter>
      </Parameter>
      <Parameter name="Version" relatedStateVariable ="Version"/>
      <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
      <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
      <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
      <Parameter name="ConditionDetectedFlag" relatedStateVariable ="ConditionDetectedFlag"/>
   </InputParameterList>
   <OutputParameterList>
      <Parameter    name="ProductionSpec"    relatedStateVariable="ProductionSpec">
        <Parameter    name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
          <Parameter    name="SpecType" relatedStateVariable="SpecType"/>
          <Parameter    name="ComponentId" relatedStateVariable="ComponentId"/>
          <Parameter    name="ProdSpec"/>
        </Parameter>
      </Parameter>
      <Parameter name="Version" relatedStateVariable ="Version"/>
      <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
      <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
      <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
      <Parameter name="ConditionDetectedFlag" relatedStateVariable ="ConditionDetectedFlag"/>
</OutputParameterList>
</Service>
```

(2)GetIcon Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon" type="http://www.pucc.jp/2012/03/Device/IEEE11073/GasSensor/Service/GetIcon">
   <InputParameterList>
      <Parameter name="url" datatype="string"/>
   </InputParameterList>
```

```
  <OutputParameterList>
    <Parameter name="mimeType" datatype="string"/>
    <Parameter name="base64Data" datatype="base64Binary"/>
  </OutputParameterList>
</Service>
```

The Motion Sensor primitive device Service Meta Data Template is shown in the followings.

(1)QueryStateVariable Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon"
  type="http://www.pucc.jp/2012/03/Device/IEEE11073/MotionSensor/Service/QueryStateVariable">
  <InputParameterList>
    <Parameter  name="ProductionSpec"  relatedStateVariable="ProductionSpec">
     <Parameter  name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
      <Parameter  name="SpecType" relatedStateVariable="SpecType"/>
      <Parameter  name="ComponentId" relatedStateVariable="ComponentId"/>
      <Parameter  name="ProdSpec"/>
     </Parameter>
    </Parameter>
    <Parameter name="Version" relatedStateVariable ="Version"/>
    <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
    <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
    <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
    <Parameter name="MotionDetectedFlag" relatedStateVariable ="MotionDetectedFlag"/>
    <Parameter name="MotionDetectedDelayFlag" relatedStateVariable ="MotionDetectedDelayFlag"/>
    <Parameter name="TamperDetectedFlag" relatedStateVariable ="TamperDetectedFlag"/>
  </InputParameterList>
  <OutputParameterList>
    <Parameter  name="ProductionSpec"  relatedStateVariable="ProductionSpec">
     <Parameter  name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
      <Parameter  name="SpecType" relatedStateVariable="SpecType"/>
      <Parameter  name="ComponentId" relatedStateVariable="ComponentId"/>
      <Parameter  name="ProdSpec"/>
     </Parameter>
    </Parameter>
    <Parameter name="Version" relatedStateVariable ="Version"/>
    <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
    <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
    <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
    <Parameter name="MotionDetectedFlag" relatedStateVariable ="MotionDetectedFlag"/>
    <Parameter name="MotionDetectedDelayFlag" relatedStateVariable ="MotionDetectedDelayFlag"/>
    <Parameter name="TamperDetectedFlag" relatedStateVariable ="TamperDetectedFlag"/>
</OutputParameterList>
</Service>
```

(2)GetIcon Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon" type="http://www.pucc.jp/2012/03/Device/IEEE11073/MotionSensor/Service/
  GetIcon">
  <InputParameterList>
    <Parameter name="url" datatype="string"/>
  </InputParameterList>
  <OutputParameterList>
    <Parameter name="mimeType" datatype="string"/>
    <Parameter name="base64Data" datatype="base64Binary"/>
  </OutputParameterList>
</Service>
```

The Property Exit Sensor primitive device Service Meta Data Template is shown in the followings.

(1)QueryStateVariable Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon"
  type="http://www.pucc.jp/2012/03/Device/IEEE11073/PropertyExitSensor/Service/QueryStateVariable">
  <InputParameterList>
    <Parameter  name="ProductionSpec"  relatedStateVariable="ProductionSpec">
     <Parameter  name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
      <Parameter  name="SpecType" relatedStateVariable="SpecType"/>
      <Parameter  name="ComponentId" relatedStateVariable="ComponentId"/>
      <Parameter  name="ProdSpec"/>
     </Parameter>
    </Parameter>
    <Parameter name="Version" relatedStateVariable ="Version"/>
    <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
    <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
    <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
    <Parameter name="OccupantExitPropertyFlag" relatedStateVariable ="OccupantExitPropertyFlag"/>
    <Parameter name="DoorLeftOpenFlag" relatedStateVariable ="DoorLeftOpenFlag"/>
  </InputParameterList>
  <OutputParameterList>
    <Parameter  name="ProductionSpec"  relatedStateVariable="ProductionSpec">
     <Parameter  name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
      <Parameter  name="SpecType" relatedStateVariable="SpecType"/>
      <Parameter  name="ComponentId" relatedStateVariable="ComponentId"/>
      <Parameter  name="ProdSpec"/>
     </Parameter>
    </Parameter>
```

```
    <Parameter name="Version" relatedStateVariable ="Version"/>
    <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
    <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
    <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
    <Parameter name="OccupantExitPropertyFlag" relatedStateVariable ="OccupantExitPropertyFlag"/>
    <Parameter name="DoorLeftOpenFlag" relatedStateVariable ="DoorLeftOpenFlag"/>
</OutputParameterList>
</Service>
```

(2)GetIcon Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon" type="http://www.pucc.jp/2012/03/Device/IEEE11073/PropertyExitSensor/Service/
  GetIcon">
  <InputParameterList>
    <Parameter name="url" datatype="string"/>
  </InputParameterList>
  <OutputParameterList>
    <Parameter name="mimeType" datatype="string"/>
    <Parameter name="base64Data" datatype="base64Binary"/>
  </OutputParameterList>
</Service>
```

The Enuresis Sensor primitive device Service Meta Data Template is shown in the followings.

(1)QueryStateVariable Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon"
  type="http://www.pucc.jp/2012/03/Device/IEEE11073/EnuresisSensor/Service/QueryStateVariable">
  <InputParameterList>
    <Parameter  name="ProductionSpec"  relatedStateVariable="ProductionSpec">
      <Parameter  name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
        <Parameter  name="SpecType" relatedStateVariable="SpecType"/>
        <Parameter  name="ComponentId" relatedStateVariable="ComponentId"/>
        <Parameter  name="ProdSpec"/>
      </Parameter>
    </Parameter>
    <Parameter name="Version" relatedStateVariable ="Version"/>
    <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
    <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
    <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
    <Parameter name="EnuresisDetectedFlag" relatedStateVariable ="EnuresisDetectedFlag"/>
  </InputParameterList>
  <OutputParameterList>
```

```
      <Parameter    name="ProductionSpec"    relatedStateVariable="ProductionSpec">
        <Parameter    name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
          <Parameter    name="SpecType" relatedStateVariable="SpecType"/>
          <Parameter    name="ComponentId" relatedStateVariable="ComponentId"/>
          <Parameter    name="ProdSpec"/>
        </Parameter>
      </Parameter>
      <Parameter name="Version" relatedStateVariable ="Version"/>
      <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
      <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
      <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
      <Parameter name="EnuresisDetectedFlag" relatedStateVariable ="EnuresisDetectedFlag"/>
</OutputParameterList>
</Service>
```

(2)GetIcon Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon" type="http://www.pucc.jp/2012/03/Device/IEEE11073/EnuresisSensor/Service/
   GetIcon">
   <InputParameterList>
      <Parameter name="url" datatype="string"/>
   </InputParameterList>
   <OutputParameterList>
      <Parameter name="mimeType" datatype="string"/>
      <Parameter name="base64Data" datatype="base64Binary"/>
   </OutputParameterList>
</Service>
```

The Contact Closure Sensor primitive device Service Meta Data Template is shown in the followings.

(1)QueryStateVariable Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon"
  type="http://www.pucc.jp/2012/03/Device/IEEE11073/ContactClosureSensor/Service/QueryStateVariable">
  <InputParameterList>
    <Parameter  name="ProductionSpec"  relatedStateVariable="ProductionSpec">
      <Parameter  name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
        <Parameter  name="SpecType" relatedStateVariable="SpecType"/>
        <Parameter  name="ComponentId" relatedStateVariable="ComponentId"/>
        <Parameter  name="ProdSpec"/>
      </Parameter>
    </Parameter>
    <Parameter name="Version" relatedStateVariable ="Version"/>
    <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
    <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
    <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
    <Parameter name="ContactFlag" relatedStateVariable ="ContactFlag"/>
  </InputParameterList>
  <OutputParameterList>
    <Parameter  name="ProductionSpec"  relatedStateVariable="ProductionSpec">
      <Parameter  name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
        <Parameter  name="SpecType" relatedStateVariable="SpecType"/>
        <Parameter  name="ComponentId" relatedStateVariable="ComponentId"/>
        <Parameter  name="ProdSpec"/>
      </Parameter>
    </Parameter>
    <Parameter name="Version" relatedStateVariable ="Version"/>
    <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
    <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
    <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTim "/>
    <Parameter name="ContactFlag" relatedStateVariable ="ContactFlag"/>
</OutputParameterList>
</Service>
```

(2)GetIcon Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon"type="http://www.pucc.jp/2012/03/Device/IEEE11073/ContactClosureSensor/Service/
  Service/GetIcon">
  <InputParameterList>
    <Parameter name="url" datatype="string"/>
```

```
  </InputParameterList>
  <OutputParameterList>
    <Parameter name="mimeType" datatype="string"/>
    <Parameter name="base64Data" datatype="base64Binary"/>
  </OutputParameterList>
</Service>
```

The Usage Sensor primitive device Service Meta Data Template is shown in the followings.

(1)QueryStateVariable Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon"
  type="http://www.pucc.jp/2012/03/Device/IEEE11073/UsageSensor/Service/QueryStateVariable">
  <InputParameterList>
    <Parameter  name="ProductionSpec"  relatedStateVariable="ProductionSpec">
     <Parameter  name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
      <Parameter  name="SpecType" relatedStateVariable="SpecType"/>
      <Parameter  name="ComponentId" relatedStateVariable="ComponentId"/>
      <Parameter  name="ProdSpec"/>
     </Parameter>
    </Parameter>
    <Parameter name="Version" relatedStateVariable ="Version"/>
    <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
    <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
    <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
    <Parameter name="UsageStartedFlag" relatedStateVariable ="UsageStartedFlag"/>
    <Parameter name="UsageEndedFlag" relatedStateVariable ="UsageEndedFlag"/>
    <Parameter name="ExpectedUsageStartViolationFlag"
        relatedStateVariable ="ExpectedUsageStartViolationFlag"/>
    <Parameter name="ExpectedUsageStopViolationFlag"
        relatedStateVariable ="ExpectedUsageStopViolationFlag"/>
    <Parameter name="AbsenceViolationFlag" relatedStateVariable ="AbsenceViolationFlag"/>
  </InputParameterList>
  <OutputParameterList>
    <Parameter  name="ProductionSpec"  relatedStateVariable="ProductionSpec">
     <Parameter  name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
      <Parameter  name="SpecType" relatedStateVariable="SpecType"/>
      <Parameter  name="ComponentId" relatedStateVariable="ComponentId"/>
      <Parameter  name="ProdSpec"/>
     </Parameter>
    </Parameter>
    <Parameter name="Version" relatedStateVariable ="Version"/>
    <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
    <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
    <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
```

```
    <Parameter name="UsageStartedFlag" relatedStateVariable ="UsageStartedFlag"/>
    <Parameter name="UsageEndedFlag" relatedStateVariable ="UsageEndedFlag"/>
    <Parameter name="ExpectedUsageStartViolationFlag"
        relatedStateVariable ="ExpectedUsageStartViolationFlag"/>
    <Parameter name="ExpectedUsageStopViolationFlag"
        relatedStateVariable ="ExpectedUsageStopViolationFlag"/>
    <Parameter name="AbsenceViolationFlag" relatedStateVariable ="AbsenceViolationFlag"/>
</OutputParameterList>
</Service>
```

(2)GetIcon Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon"type="http://www.pucc.jp/2012/03/Device/IEEE11073/UsageSensor/Service/
  Service/GetIcon">
  <InputParameterList>
    <Parameter name="url" datatype="string"/>
  </InputParameterList>
  <OutputParameterList>
    <Parameter name="mimeType" datatype="string"/>
    <Parameter name="base64Data" datatype="base64Binary"/>
  </OutputParameterList>
</Service>
```

The Switch Sensor primitive device Service Meta Data Template is shown in the followings.

(1)QueryStateVariable Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon"
  type="http://www.pucc.jp/2012/03/Device/IEEE11073/SwitchSensor/Service/QueryStateVariable">
  <InputParameterList>
    <Parameter  name="ProductionSpec"  relatedStateVariable="ProductionSpec">
      <Parameter  name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
        <Parameter  name="SpecType" relatedStateVariable="SpecType"/>
        <Parameter  name="ComponentId" relatedStateVariable="ComponentId"/>
        <Parameter  name="ProdSpec"/>
      </Parameter>
    </Parameter>
    <Parameter name="Version" relatedStateVariable ="Version"/>
    <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
    <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
    <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
    <Parameter name="SwitchFlag" relatedStateVariable ="SwitchFlag"/>
  </InputParameterList>
```

```
  <OutputParameterList>
    <Parameter    name="ProductionSpec"    relatedStateVariable="ProductionSpec">
     <Parameter    name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
      <Parameter    name="SpecType" relatedStateVariable="SpecType"/>
      <Parameter    name="ComponentId" relatedStateVariable="ComponentId"/>
      <Parameter    name="ProdSpec"/>
     </Parameter>
    </Parameter>
    <Parameter name="Version" relatedStateVariable ="Version"/>
    <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
    <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
    <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
    <Parameter name="SwitchFlag" relatedStateVariable ="SwitchFlag"/>
</OutputParameterList>
</Service>
```

(2)GetIcon Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon"type="http://www.pucc.jp/2012/03/Device/IEEE11073/SwitchSensor/Service/
  Service/GetIcon">
  <InputParameterList>
    <Parameter name="url" datatype="string"/>
  </InputParameterList>
  <OutputParameterList>
    <Parameter name="mimeType" datatype="string"/>
    <Parameter name="base64Data" datatype="base64Binary"/>
  </OutputParameterList>
</Service>
```

The Dosage Sensor primitive device Service Meta Data Template is shown in the followings.

(1)QueryStateVariable Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon"
  type="http://www.pucc.jp/2012/03/Device/IEEE11073/DosageSensor/Service/QueryStateVariable">
  <InputParameterList>
    <Parameter    name="ProductionSpec"    relatedStateVariable="ProductionSpec">
     <Parameter    name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
      <Parameter    name="SpecType" relatedStateVariable="SpecType"/>
      <Parameter    name="ComponentId" relatedStateVariable="ComponentId"/>
      <Parameter    name="ProdSpec"/>
     </Parameter>
    </Parameter>
```

```
      <Parameter name="Version" relatedStateVariable ="Version"/>
      <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
      <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
      <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
      <Parameter name="DosageTakenFlag" relatedStateVariable ="DosageTakenFlag"/>
      <Parameter name="DosageMissedFlag" relatedStateVariable ="DosageMissedFlag"/>
   </InputParameterList>
   <OutputParameterList>
      <Parameter    name="ProductionSpec"    relatedStateVariable="ProductionSpec">
        <Parameter    name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
          <Parameter    name="SpecType" relatedStateVariable="SpecType"/>
          <Parameter    name="ComponentId" relatedStateVariable="ComponentId"/>
          <Parameter    name="ProdSpec"/>
        </Parameter>
      </Parameter>
      <Parameter name="Version" relatedStateVariable ="Version"/>
      <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
      <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
      <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
      <Parameter name="DosageTakenFlag" relatedStateVariable ="DosageTakenFlag"/>
      <Parameter name="DosageMissedFlag" relatedStateVariable ="DosageMissedFlag"/>
</OutputParameterList>
</Service>
```

(2)GetIcon Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon"type="http://www.pucc.jp/2012/03/Device/IEEE11073/SwitchSensor/Service/
   Service/GetIcon">
   <InputParameterList>
      <Parameter name="url" datatype="string"/>
   </InputParameterList>
   <OutputParameterList>
      <Parameter name="mimeType" datatype="string"/>
      <Parameter name="base64Data" datatype="base64Binary"/>
   </OutputParameterList>
</Service>
```

The Temperature Sensor primitive device Service Meta Data Template is shown in the followings.

(1)QueryStateVariable Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon"
  type="http://www.pucc.jp/2012/03/Device/IEEE11073/TemperatureSensor/Service/QueryStateVariable">
  <InputParameterList>
    <Parameter  name="ProductionSpec"  relatedStateVariable="ProductionSpec">
     <Parameter  name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
      <Parameter  name="SpecType" relatedStateVariable="SpecType"/>
      <Parameter  name="ComponentId" relatedStateVariable="ComponentId"/>
      <Parameter  name="ProdSpec"/>
     </Parameter>
    </Parameter>
    <Parameter name="Version" relatedStateVariable ="Version"/>
    <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
    <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
    <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
    <Parameter name="HighTemperatureDetectedFlag"
        relatedStateVariable ="HighTemperatureDetectedFlag"/>
    <Parameter name="LowTemperatureDetectedFlag"
        relatedStateVariable ="LowTemperatureDetectedFlag"/>
    <Parameter name="RateOfChangeFlag" relatedStateVariable ="RateOfChangeFlag"/>
  </InputParameterList>
  <OutputParameterList>
    <Parameter  name="ProductionSpec"  relatedStateVariable="ProductionSpec">
     <Parameter  name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
      <Parameter  name="SpecType" relatedStateVariable="SpecType"/>
      <Parameter  name="ComponentId" relatedStateVariable="ComponentId"/>
      <Parameter  name="ProdSpec"/>
     </Parameter>
    </Parameter>
    <Parameter name="Version" relatedStateVariable ="Version"/>
    <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
    <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
    <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
    <Parameter name="HighTemperatureDetectedFlag"
        relatedStateVariable ="HighTemperatureDetectedFlag"/>
    <Parameter name="LowTemperatureDetectedFlag"
        relatedStateVariable ="LowTemperatureDetectedFlag"/>
    <Parameter name="RateOfChangeFlag" relatedStateVariable ="RateOfChangeFlag"/>
</OutputParameterList>
</Service>
```

(2)GetIcon Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon"type="http://www.pucc.jp/2012/03/Device/IEEE11073/TemperatureSensor/Service/
   Service/GetIcon">
   <InputParameterList>
      <Parameter name="url" datatype="string"/>
   </InputParameterList>
   <OutputParameterList>
      <Parameter name="mimeType" datatype="string"/>
      <Parameter name="base64Data" datatype="base64Binary"/>
   </OutputParameterList>
</Service>
```

11. Strength Fitness Equipment Device

In this section, the strength fitness equipment Device Meta Data is specified.

11.1. Device Model

The device model of a strength fitness equipment device is shown below,

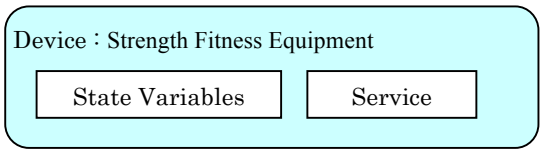


Figure 11.1-1. Device Model of a Strength Fitness Equipment Device

11.2. Device Type

The Device Type ID (URL form) of a strength fitness equipment device is shown below,

http://www.pucc.jp/2012/03/Device/IEEE11073/StrengthFitnessEquipment

11.3. State Variables

State Variables of Strength Fitness Equipment is shown in the following table.

Table 11.3-1:State Variables of Strength Fitness Equipment (1/11)

	State Variable Name	Description	Data Type	Event
1	ProductionSpec	List of device manufacturer's informationation	array	No
2	ProdSpecEntry	Manufacture's informationmation	struct	No
3	SpecType	Information Type. Enable values are as follows, "unspecified" "part-number" "hw-revision" "sw-revision" "fw-revision" "protocol-revision" "prod-spec-gmdn"	string	No
4	ComponentID	Component ID	integer	No
5	ProdSpec	Manufacture's informationmation	integer	No
6	Version	Device Version. In the case of IEEE11073-10415, value SHOULD be "1"	integer	No
7	DateAndTime	Current date and time value indicated by a devicedevice	dateTime	No
8	PersonId	User's personal ID	integer	Yes
9	MeasurementTime	Last measurement time provided by a device	dateTime	Yes
10	Set	Information structure related to a training	struct	Yes
11	StartTime	Training starting time.	dateTime	Yes

Table 11.3-2: State Variables of Strength Fitness Equipment (2/11)

	State Variable Name	Description	Data Type	Event
12	MuscleGroup	Muscle Group for training Enable values are as follows, "SkeletalMuscle" "MuscleOfHead" "EyeMuscle" "SuperiorRectus" "InferiorRectus" "MedialRectus" "lateralRectus" "SuperiorOblique " "InferiorOblique" "FacialMuscle" "OccipitofrontalMuscle" "OrbicularisOculiMuscle" "OrbicularisOculiMuscleParsOrbitalis" "PosteriorAuricularMuscle" "OrbicularisOrisMuscle" "DepressorAnguliOrisMuscle" "RisoriusMuscle "ZygomaticusMajorMuscle" "ZygomaticusMinorMuscle" "LevatorLabiiSuperiorisMuscle" "LevatorLabiiSuperiorisAlaequeNasiMuscle" "DepressorLabiiInferiorisMuscle" "LevatorAnguliOrisMuscle" "Buccinator" "MentalisMuscle" "Masseter" "TemporalMuscle"	string	Yes

Table 11.3-3: State Variables of Strength Fitness Equipment (3/11)

	State Variable Name	Description	Data Type	Event
12	MuscleGroup	"PterygoidMuscle" "LateralPterygoidMuscle" "InternalPterygoidMuscle" "LingualMuscle" "GenioglossalMuscle" "LaryngealMuscle" "CricothyroidMuscle" "ThyroatytenoidMuscle" "NecklMuscle" "PlatysmaMuscle" "LongusColliMuscle" "SternocleidomastoidMuscle" "DigastricMuscle" "PosteriorBellyOfDigastricMuscle" "AnteriorBellyOfDigastricMuscle" "MylohyoidMuscle" "TrunkMuscle" "BackMuscle" "UpperBackMuscle" "LowerBackMuscle" "TrapeziusMuscle" "LatissimusDorsiMuscle" "RhomboidMajorMuscle" "LevatorScapulaeMuscle" "PosteriorSerratusMuscle" "SpleniusCapitisMuscle" "SpleniusCervicisMuscle" "SpleniusMuscle"	string	Yes

Table 11.3-4: State Variables of Strength Fitness Equipment (4/11)

	State Variable Name	Description	Data Type	Event
12	MuscleGroup	"ErectorSpinaeMuscle" "SpinalMuscle" "SpinalisThoracisMuscle" "SpinalisCervicisMuscle" "SemiSpinalMuscle" "SemiSpinalisThoracisMuscle" "SemiSpinalisCapitisMuscle" "MultifidusMuscle" "InterspinalMuscles" "CervicalInterspinalesMuscles" "ThoracicInterspinalesMuscles" "LumbarIinterspinalesMuscles" "ThoraxMuscles" "PectoralMajorMuscles" "PectoralMinorMuscles" "SubclavianMuscles" "SerratusAnteriorMuscles" "DiaphragmMuscles" "AbdominalMuscle" "ExternalObliqueMuscle" "InternalObliqueMuscle" "TransverseAbdominalMuscle" "LumbarQuadrateMuscle" "PelvicMuscle" "PuborectalMuscle" "CoccygealMuscle" "SpincterAniMuscle" "InternalSpincterAniMuscle" "UpperExtremityMuscle"	string	Yes

Table 11.3-5: State Variables of Strength Fitness Equipment (5/11)

	State Variable Name	Description	Data Type	Event
12	MuscleGroup	"DeltoidMuscle" "SupraspinatusMuscle" "InspinatusMuscle" "TeresMinorMuscle" "TeresMajorMuscle" "SubscapularMuscle" "BicepsBrachiiMuscle" "BrachialMuscle" "CoracobrachialMuscle" "TricepsBrachiiMuscle" "LongHeadOfTricepsBrachiiMuscle" "LateralHeadOfTricepsBrachiiMuscle" "TendonOfTricepsBrachiiMuscle" "AnconeusMuscle" "PronatorMuscle" "FlexorCarpiRadialisMuscle" "LongPalmarMuscle" "FlexorCarpiUlnarisMuscle" "FlexorDigitorumSuperficialisMuscle" "FlexorDigitorumProfundusMuscle" "FlexorPollicisLongus" "PronatorQuadratusMuscle" "BrachioradialMuscle" "ExtensorCarpiRadialisLongusMuscle" "ExtensorCarpiRadialisBrevisMuscle" "DigitalExtensorMuscle" "ExtensorDigitiMinimiMuscle" "ExtensorCarpiUlnarisMuscle" "SupinatorMuscle"	string	Yes

Table 11.3-6: State Variables of Strength Fitness Equipment (6/11)

	State Variable Name	Description	Data Type	Event
12	MuscleGroup	"AbductorPollicisLongusMuscle" "ExtensorPollicsBrevis" "ExtensorPollicsLongus" "ExtensorIndicisMuscle" "PalmarisBrevisMuscle" "AbductorPollicisBrevisMuscle" "FlexorPollicisBrevis" "OpponensPollicisMuscle" "AdductorPollicisMuscle" "AbductorDigitiMinimiMuscle" "FlexorDigitiMinimiBrevisMuscle" "OpponensDigitiMinimiMuscle" "LumbricalMuscle" "DorsalInterosseousMuscle" "PalmarInterosseousMuscle" : "ThighMuscle" "LegMuscle" "FootMuscle" "IliopsoasMuscle" "GluteusMaximusMuscle" "GluteusMediusMuscle" "GluteusMinimusMuscle" "TensorFasciaeLataeMuscle" "PiriformMuscle" "ObturatorMuscle" "GemeliusMuscle" "QuadratusFemorisMuscle" "SartoriusMuscle" "QuadricepsFemoris"	string	Yes

Table 11.3-7: State Variables of Strength Fitness Equipment (7/11)

	State Variable Name	Description	Data Type	Event
12	MuscleGroup	"RectusFemorisMuscle" "VastusLateralisMuscle" "VastusIntermediusMuscle" "VastusMedialisMuscle" "PectinealMuscle" "AbductorPollicisLongusMuscle" "AbductorPollicisBrevisMuscle" "AdductorMagnusMuscle" "GracilisMuscle" "BicepsFemorisMuscle" "LongHeadOfBicepsFemorisMuscle" "ShortHeadOfBicepsFemorisMuscle" "SemitendinousMuscle" "SemimembranosusMuscle" "TibialAnteriorMuscle" "ExtensorDigitorumLongusMuscle" "ExtensorHallucisLongusMuscle" "PeronealMuscle" "LongPeronealMuscle" "PeroneusBrevisMuscle" "TricepsSuraeMuscle" "Gastrocnemius" "LateralHeadOfGastrocnemius" "HeadOfGastrocnemius" "MedialHeadOfGastrocnemius" "SoleusMuscle" "PlantarMuscle" "PoplitealMuscle" "TibialisPosteriorMuscle"	string	Yes

Table 11.3-8: State Variables of Strength Fitness Equipment (8/11)

	State Variable Name	Description	Data Type	Event
12	MuscleGroup	"FlexorDigitorumLongusMuscle" "ExtensorHallucisBrevisMuscle" "ExtensorDigitorumBrevisMuscle" "AbductorHallucisMuscle" "FlexorHallucisBrevisMuscle" "AdductorHallucisMuscle" "AbductorDigitiMinimiMuscle" "FlexorDigitiMinimiBrevisMuscleMuscle" "QuadratusPlantaeMuscle" "LumbricalMuscle" "DorsalInterosseousMuscle" "PlantarInterosseousMuscle"	string	Yes
13	Duration	Observation duration. "unit" property value SHOULD be "s".	integer	Yes
14	Resistance	Resistance "unit" property value SHOULD be either "g" or "lb". "accuracy" property MAY be used for specifying the maximum deviation between measurement value and real value. Property value is described in float type.	float	Yes
15	RepetitionCount	Repetition Count. "unit" property value MAY not specify. "accuracy" property MAY be used for specifying the maximum deviation between measurement value and real value. Property value is described in float type.	float	Yes

Table 11.3-9: State Variables of Strength Fitness Equipment (9/11)

	State Variable Name	Description	Data Type	Event
12	MuscleGroup	"FlexorDigitorumLongusMuscle" "ExtensorHallucisBrevisMuscle" "ExtensorDigitorumBrevisMuscle" "AbductorHallucisMuscle" "FlexorHallucisBrevisMuscle" "AdductorHallucisMuscle" "AbductorDigitiMinimiMuscle" "FlexorDigitiMinimiBrevisMuscleMuscle" "QuadratusPlantaeMuscle" "LumbricalMuscle" "DorsalInterosseousMuscle" "PlantarInterosseousMuscle"	string	Yes
13	Duration	Observation duration. ”unit” property value SHOULD be “s”.	integer	Yes
14	Resistance	Resistance “unit” property value SHOULD be either “g” or “lb”. “accuracy” property MAY be used for specifying the maximum deviation between measurement value and real value. Property value is described in float type.	float	Yes
15	RepetitionCount	Repetition Count “unit” property value MAY not specify. “accuracy” property MAY be used for specifying the maximum deviation between measurement value and real value. Property value is described in float type.	float	Yes

Table 11.3-10: State Variables of Strength Fitness Equipment (10/11)

	State Variable Name	Description	Data Type	Event
16	Repetion	Repetion. "unit" property value SHOULD be either "m" or "in". "accuracy" property MAY be used for specifying the maximum deviation between measurement value and real value. Property value is described in float type.	float	Yes
17	ExercisePosition	Exercise Position Enable values are as follows, "Incline" "Decline" "Seated" "Standing" "Kneeling" "Bentover" "Lying"	string	Yes
18	ExerciseLaterality	Exercise Laterality Enable values are as follows, "Both" "Right" "Left"	string	Yes
19	ExerciseGrip	Exercise Grip Enable values are as follows, "Parallel" "Overhand" "UnderHand" "Close" "Wide" "Gripless"	string	Yes

Table 11.3-11: State Variables of Strength Fitness Equipment (11/11)

	State Variable Name		Description	Data Type	Event
20		ExerciseMovement	Exercise Movement Enable values are as follows "Flexion" "Extension" "Rotation" "Rotation" "Abduction" : (Motion from body center to outside) "Adduction" : (Motion to body center from outside)	string	Yes

11.4. Service

Strength Fitness Equipment device'e services are shown in the following table.

Table11.4-1: Strength Fitness Equipment deviceet services

	Service	Description
1	QueryStateVariable	Query Strength Fitness Equipment device State Variables.
2	SetTime	Set time on a Strength Fitness Equipment device
3	GetIcon	Get Icon image of Strength Fitness Equipment device

The followings are each service's description.

11.4.1. QueryStateVariable

(1) Description

Query Strength Fitness Equipment device State Variables.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/StrengthFitnessEquipment/Service/QueryStateVariable

(3) Input parameters

Table 11.4.1-1: QueryStateVariable Service Input parameters

	Parameter	State Variables	Description
1	ProductionSpec	ProductionSpec	Values SHOULD NOT specified for query.
2	ProdSpecEntry	ProdSpecEntry	
3	SpecType	SpecType	
4	ComponentId	ComponentId	
5	ProdSpec	ProdSpec	
6	Version	Version	
7	DateAndTime	DateAndTime	
8	PersonId	PersonId	
9	MeasurementTime	MeasurementTime	
10	Set	Set	
11	StartTime	StartTime	
12	MuscleGroup	MuscleGroup	
13	Duration	Duration	
14	Resistance	Resisntance	
15	RepetitionCount	RepetitionCount	
16	Repetition	Repetition	
17	ExercisePosition	ExercisePosition	
18	ExerciseLaterality	ExerciseLaterality	
19	ExerciseGrip	ExerciseGrip	
20	ExerciseMovement	ExerciseMovement	

(4) Output parameters

Table 11.4.1-2: QueryStateVariable Service Output parameters

	Parameter	State Variables	Description
1	ProductionSpec	ProductionSpec	Value of the specified parameter as input SHOULD be included in output.
2	ProdSpecEntry	ProdSpecEntry	
3	SpecType	SpecType	
4	ComponentId	ComponentId	
5	ProdSpec	ProdSpec	
6	Version	Version	
7	DateAndTime	DateAndTime	
8	PersonId	PersonId	
9	MeasurementTime	MeasurementTime	
10	Set	Set	
11	StartTime	StartTime	
12	MuscleGroup	MuscleGroup	
13	Duration	Duration	
14	Resistance	Resisntance	
15	RepetitionCount	RepetitionCount	
16	Repetition	Repetition	
17	ExercisePosition	ExercisePosition	
18	ExerciseLaterality	ExerciseLaterality	
19	ExerciseGrip	ExerciseGrip	
20	ExerciseMovement	ExerciseMovement	

11.4.2. SetTime

(1) Description

Set time on a device.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/StrengthFitnessEquipment/Service/SetTime

(3) Input parameters

Table 11.4.2-1: SetTime Service Input parameters

	Parameter	State Variables	Description
1	dateAndTime	DateAndTime	Set time on a Strength Fitness Equipment device.

(4) Output parameters

None.

11.4.3. GetIcon

(1) Description

Obtain an icon image data of a device.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/StrengthFitnessEquipment/Service/GetIcon

(3) Input parameters

Table 11.4.3-1: GetIcon Service Input parameters

	Parameter	State Variables	Data Type	Description
1	url	-	string	Specify URL of Icon data.

(4) Output parameters

Table 11.4.3-2: GetIcon Service Output parameters Service Output parameters

	Parameter	State Variables	Data Type	Description
1	mimeType	-	string	Specify MIME media type of the icon data.icon data.
2	base64Data	-	base64Binary	Set the icon data encode by BASE 64.

11.5. Meta Data

11.5.1. Device Meta Data

The glucose meter device Meta Data Template is shown in the followings.

Descriptions in Red Italic Character : show values related to each glucose meter devices.

```
<?xml version="1.0"?>
<Device  type="http://www.pucc.jp/2012/03/Device/IEEE11073/GlucoseMeter"
          id="global unique ID for this device"  name="short user-friendly title">
  <Specification>
    <URLBase>base URL for all relative URLs</URLBase>
    <Manufacturer>manufacturer name</Manufacturer>
    <ManufacturerURL>URL to manufacturer site</ManufacturerURL>
    <ManufactureDate>date of manufacture</ManufactureDate>
    <ModelDescription>long user-friendly title</ModelDescription>
    <ModelName>model name</ModelName>
    <ModelNumber>model number</ModelNumber>
    <ModelURL>URL to model site</ModelURL>
    <SerialNumber>manufacturer's serial number</SerialNumber>
    <UDN>uuid:UUID</UDN>
    <UPC>Universal Product Code</UPC>
    <IconList>
      <Icon>
        <Mimetype>image/format</Mimetype>
        <Width>horizontal pixels</Width>
        <Height>vertical pixels</Height>
        <Depth>color depth</Depth>
        <Url>URL to icon</Url>
      </Icon>
      XML to declare other icons, if any, go here
    </IconList>
  </Specification>
  <StateVariableList>
    <StateVariable  name="ProductionSpec"  datatype="array"  sendEvents="no">
      <StateVariable  name="ProdSpecEntry"  datatype="struct"  sendEvents="no">
        <StateVariable  name="SpecType"  datatype="string"  sendEvents="no"/>
        <StateVariable  name="ComponentId"  datatype="string"  sendEvents="no"/>
        <StateVariable  name="ProdSpec"  datatype="string"  sendEvents="no"/>
      </StateVariable>
    </StateVariable>
    <StateVariable  name="Version"  datatype="integer"  sendEvents="yes"/>
    <StateVariable  name="DateAndTime"  datatype="dateTime"  sendEvents="yes"/>
    <StateVariable  name="PersonId"  datatype="integer"  sendEvents="yes"/>
    <StateVariable  name="MeasurementTime"  datatype="dateTime"  sendEvents="yes"/>
    <StateVariable  name="Set"  datatype="struct" sendEvents="yes">
```

```
<StateVariable  name="StartTime"  datatype="dateTime" sendEvents="no"/>
<StateVariable  name="MuscleGroup"  datatype="string" sendEvents="no">
 <AllowedValueList>
  <AllowedValue>SkeletalMuscle</AllowedValue>
  <AllowedValue>MuscleOfHead</AllowedValue>
        :
       (Refer Table11.3.1)
        :
 </AllowedValueList>
</StateVariable>
<StateVariable  name="Duration"  datatype="integer" unit="s" sendEvents="no"/>
<StateVariable  name="Resistance"  datatype="float" unit="g" sendEvents="no"/>
<StateVariable  name="RepetitionCount"  datatype="float" sendEvents="no"/>
<StateVariable  name="Repetition"  datatype="float" unit="m" sendEvents="no"/>
<StateVariable  name="ExercisePoosition"  datatype="string" sendEvents="no">
 <AllowedValueList>
  <AllowedValue>Incline</AllowedValue>
  <AllowedValue>Decline</AllowedValue>
  <AllowedValue>Seated</AllowedValue>
  <AllowedValue>Standing</AllowedValue>
  <AllowedValue>Kneeling</AllowedValue>
  <AllowedValue>Bentover</AllowedValue>
  <AllowedValue>Lying</AllowedValue>
 </AllowedValueList>
</StateVariable>
<StateVariable  name="ExerciseLaterality"  datatype="string" sendEvents="no">
 <AllowedValueList>
  <AllowedValue>Both</AllowedValue>
  <AllowedValue>Right</AllowedValue>
  <AllowedValue>Left</AllowedValue>
 </AllowedValueList>
</StateVariable>
<StateVariable  name="ExerciseGrip"  datatype="string" sendEvents="no">
 <AllowedValueList>
  <AllowedValue>Parallel</AllowedValue>
  <AllowedValue>Overhand</AllowedValue>
  <AllowedValue>Underhand</AllowedValue>
  <AllowedValue>Close</AllowedValue>
  <AllowedValue>Wide</AllowedValue>
  <AllowedValue>Gripless</AllowedValue>
 </AllowedValueList>
</StateVariable>
<StateVariable  name="ExersiseMovement"  datatype="string" sendEvents="no">
 <AllowedValueList>
  <AllowedValue>Flexion</AllowedValue>
  <AllowedValue>Extension</AllowedValue>
  <AllowedValue>Rotation</AllowedValue>
```

```
            <AllowedValue>Abduction</AllowedValue>
            <AllowedValue>Adduction</AllowedValue>
          </AllowedValueList>
        </StateVariable>
      </StateVariable>
    </StateVariableList>
    <ServiceList>
      <Service    name="QueryStateVariable" type="http://www.pucc.jp/2012/03/Device/IEEE11073/
          StrengthFitnessEqupment/Service/QueryStateVariable"/>
      <Service    name="SetTime" type="http://www.pucc.jp/2012/03/Device/IEEE11073/
          StrengthFitnessEqupment/Service/SetTime"/>
      <Service    name="GetIcon" type="http://www.pucc.jp/2012/03/Device/IEEE11073/
          StrengthFitnessEqupment/Service/GetIcon"/>
    </ServiceList>
    <PrimitiveDeviceList/>
    <EventConditionList/>
</Device>
```


11.5.2. Service Meta Data

The Service Meta Data Template of strength fitness equpment is shown in the followings.

(1)QueryStateVariable Service Meta Data

```
<?xml version="1.0" ?>
<Service name="QueryStateVariable" type="http://www.pucc.jp/2012/03/Device/IEEE11073/
      StrengthFitnessEqupment/Service/QueryStateVariable">
  <InputParameterList>
    <Parameter   name="ProductionSpec"   relatedStateVariable="ProductionSpec">
     <Parameter   name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
       <Parameter   name="SpecType" relatedStateVariable="SpecType"/>
       <Parameter   name="ComponentId" relatedStateVariable="ComponentId"/>
       <Parameter   name="ProdSpec"/>
     </Parameter>
    </Parameter>
    <Parameter name="Version" relatedStateVariable ="Version"/>
    <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
    <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
    <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
    <Parameter name="Set" relatedStateVariable ="Set">
     <Parameter name="StartTime" relatedStateVariable ="StartTime"/>
     <Parameter name="MuscleGroup" relatedStateVariable ="MuscleGroup"/>
     <Parameter name="Duration" relatedStateVariable ="Duration"/>
     <Parameter name="Resistance" relatedStateVariable ="Resistance"/>
     <Parameter name="RepetitionCount" relatedStateVariable ="RepetitionCount"/>
     <Parameter name="Repetition" relatedStateVariable ="Repetition"/>
     <Parameter name="ExcercisePosition" relatedStateVariable ="ExcercisePosition"/>
     <Parameter name="ExcerciseLaterality" relatedStateVariable ="ExcerciseLaterality"/>
     <Parameter name="ExcerciseGrip" relatedStateVariable ="ExcerciseGrip"/>
     <Parameter name="ExcerciseMovement" relatedStateVariable ="ExcerciseMovement"/>
    </Parameter>
  </InputParameterList>
  <OutputParameterList>
    <Parameter   name="ProductionSpec"   relatedStateVariable="ProductionSpec">
     <Parameter   name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
       <Parameter   name="SpecType" relatedStateVariable="SpecType"/>
       <Parameter   name="ComponentId" relatedStateVariable="ComponentId"/>
       <Parameter   name="ProdSpec"/>
     </Parameter>
    </Parameter>
    <Parameter name="Version" relatedStateVariable ="Version"/>
    <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
    <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
    <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
```

```
      <Parameter name="Set" relatedStateVariable ="Set">
        <Parameter name="StartTime" relatedStateVariable ="StartTime"/>
        <Parameter name="MuscleGroup" relatedStateVariable ="MuscleGroup"/>
        <Parameter name="Duration" relatedStateVariable ="Duration"/>
        <Parameter name="Resistance" relatedStateVariable ="Resistance"/>
        <Parameter name="RepetitionCount" relatedStateVariable ="RepetitionCount"/>
        <Parameter name="Repetition" relatedStateVariable ="Repetition"/>
        <Parameter name="ExcercisePosition" relatedStateVariable ="ExcercisePosition"/>
        <Parameter name="ExcerciseLaterality" relatedStateVariable ="ExcerciseLaterality"/>
        <Parameter name="ExcerciseGrip" relatedStateVariable ="ExcerciseGrip"/>
        <Parameter name="ExcerciseMovement" relatedStateVariable ="ExcerciseMovement"/>
      </Parameter>
   </OutputParameterList>
</Service>
```

(2)SetTime Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon"
      type="http://www.pucc.jp/2012/03/Device/IEEE11073/StrengthFitnessEqupment/Service/SetTime">
   <InputParameterList>
      <Parameter name="dateAndTime" relatedStateVariable="DateAndTime"/>
   </InputParameterList>
   <OutputParameterList/>
</Service>
```

(3)GetIcon Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon"
      type="http://www.pucc.jp/2012/03/Device/IEEE11073/StrengthFitnessEqupment/Service/GetIcon">
   <InputParameterList>
      <Parameter name="url" datatype="string"/>
   </InputParameterList>
   <OutputParameterList>
      <Parameter name="mimeType" datatype="string"/>
      <Parameter name="base64Data" datatype="base64Binary"/>
   </OutputParameterList>
</Service>
```

12. Pulse Oximeter Device

In this section, the pulse oximeter Device Meta Data is specified.

12.1. Device Model

The device model of a pulse oximeter device is shown below,

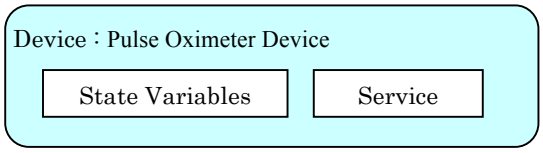


Figure 12.1-1. Device Model of a Pulse Oximeter Device

12.2. Device Type

The Device Type ID (URL form) of a pulse oximeter device is shown below,

http://www.pucc.jp/2012/03/Device/IEEE11073/PulseOximeter

12.3. State Variables

The state varibales of a Pulse Oxymeter device is shown in the following table.

Table 12.3-1: State varibales of a Pulse Oxymeter device (1/4)

	State Variable Name	Description	Data Type	Event
1	ProductionSpec	List of device manufacturer's informationation	array	No
2	ProdSpecEntry	Manufacture's informationmation	struct	No
3	SpecType	Information Type. Enable values are as follows, "unspecified" "part-number" "hw-revision" "sw-revision" "fw-revision" "protocol-revision" "prod-spec-gmdn"	string	No
4	ComponentID	Component ID	integer	No
5	ProdSpec	Manufacture's informationmation	integer	No
6	Version	Device Version. In the case of IEEE11073-10415, value SHOULD be "1"	integer	No
7	DateAndTime	Current date and time value indicated by a devicedevice	dateTime	No
8	PersonId	User's personal ID	integer	Yes
9	MeasurementTime	Last measurement time provided by a device	dateTime	Yes
10	SpO2	Glucose density	struct	Yes
11	TypeList	List of Glucose density measurement values	array	No

Table 12.3-2: State varibales of a Pulse Oxymeter device **(2/4)**

	State Variable Name	Description	Data Type	Event
12	Type	Type of Glucose density measurement value. Multiple type values MAY be given to one measurement. Enable values are as follows, "fast-response" "slow-response" "spot-check" "fast-response" and "slow-response" SHOULD not be given to the measument at the same time.	float	No
12	ObservedValue	Observed SpO2 value. “unit” property value SHOULD be “%”. “accuracy” property MAY be used for specifying the maximum deviation between measurement value and real value. Property value is described in float type.	float	No
13	CurrentLimits	Structure of thresholding values to determine valid measurement	struct	No
14	Upper	Upper limit value	float	No
15	Lower	Lower limit value	float	No
16	PulseRate	Pulse Rate	struct	Yes
17	TypeList	List of measurement value types	array	No
18	Type	Measurement value type Multiple type values MAY be given to one measurement.Enable values are as follows, "fast-response" "slow-response" "spot-check" "fast-response" and "slow-response" SHOULD not be given to the measument at the same time.	string	No

Table 12.3-3: Sate varibales of a Pulse Oxymeter device **(3/4)**

	State Variable Name	Description	Data Type	Event
19	ObservedValue	Observed Pulse Oxymeter Value. SPO2 measured value. "unit" property value SHOULD be "BPM". "accuracy" property MAY be used for specifying the maximum deviation between measurement value and real value. Property value is described in float type.		
20	CurrentLimits	Structure of thresholding values to determine valid measurement.	struct	No
21	Upper	Upper limit value	float	No
22	Lower	Lower limit value	float	No
23	PulsatileQuality	Theory or scaling template to regulate measurement value.	struct	Yes
24	MeasureActivePeriod	Measurement activity duration. "unit" property value SHOULD be "s"	integer	No
25	ObservedValue	Theory or scaling template to regulate measurement value. "unit" property value SHOULD be either "%" or none. "accuracy" property MAY be used for specifying the maximum deviation between measurement value and real value. Property value is described in float type.	float	No
26	Plethysmogram	Information structure of pulse oxyrate light absorption measument values with continuous and non-periodic sampling.	struct	Yes
27	SamplePeriod	Period of continuous sampling. "unit" property value SHOULD be either "s"	integer	No
28	SampleValueArray	Array of sampling value.	array	No
29	SampleValue	One element of samplimg value. "unit" property MAY not specify.	float	No

Table 12.3-4: State varibales of a Pulse Oxymeter device **(4/4)**

	State Variable Name	Description	Data Type	Event
30	PulsatileCharacteristic	Pulse characteristic. Enable values are as follows, "pulse-qual-nominal" "pulse-qual-marginal" "pulse-qual-minimal" "pulse-qual-unacceptable"	string	Yes

12.4. Service

Pulse Oximeter deviceer services are shown in the following table.

Table 12.4-1: Pulse Oximeter deviceer services

	Service	Description
1	QueryStateVariable	Query Pulse Oximeter deviceer State Variables.
2	SetTime	Set time on a Pulse Oximeter device.
3	GetIcon	Get Icon image of Pulse Oximeter device.

The followings are each service's description.

12.4.1. QueryStateVariable

(1) Description

Query Pulse Oximeter deviceer State Variables.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/PulseOximeter/Service/QueryStateVariable

(3) Input parameters

Table 12.4.1-1: QueryStateVariable Service input parameters

	Parameter	State Variables	Description
1	ProductionSpec	ProductionSpec	Values SHOULD NOT specified for query.
2	ProdSpecEntry	ProdSpecEntry	
3	SpecType	SpecType	
4	ComponentId	ComponentId	
5	ProdSpec	ProdSpec	
6	Version	Version	
7	DateAndTime	DateAndTime	
8	PersonId	PersonId	
9	MeasurementTime	MeasurementTime	
10	SpO2	SpO2	
11	TypeList	TypeList	
12	Type	Type	
13	ObservedValue	ObservedValue	
14	CurrentLimits	CurrentLimits	
15	Upper	Upper	
16	Lower	Lower	
17	PulseRate	PulseRate	
18	TypeList	TypeList	
19	Type	Type	
20	CurrentLimits	CurrentLimits	
21	Upper	Upper	
22	Lower	Lower	
23	PusatileQuality	PusatileQuality	
24	MeasureActivePeriod	MeasureActivePeriod	
25	ObservedValue	ObservedValue	
26	Plethysmogram	Plethysmogram	
27	SamplePeriod	SamplePeriod	
28	SampleValueArray	SampleValueArray	
29	SampleValue	SampleValue	
30	PulsatileCharacteristic	PulsatileCharacteristic	

(4) Output parameters

Table 12.4.1-2: QueryStateVariable Service Output parameters

	Parameter	State Variables	Description
1	ProductionSpec	ProductionSpec	Value of the specified parameter as input SHOULD be included in output.
2	ProdSpecEntry	ProdSpecEntry	
3	SpecType	SpecType	
4	ComponentId	ComponentId	
5	ProdSpec	ProdSpec	
6	Version	Version	
7	DateAndTime	DateAndTime	
8	PersonId	PersonId	
9	MeasurementTime	MeasurementTime	
10	SpO2	SpO2	
11	TypeList	TypeList	
12	Type	Type	
13	ObservedValue	ObservedValue	
14	CurrentLimits	CurrentLimits	
15	Upper	Upper	
16	Lower	Lower	
17	PulseRate	PulseRate	
18	TypeList	TypeList	
19	Type	Type	
20	CurrentLimits	CurrentLimits	
21	Upper	Upper	
22	Lower	Lower	
23	PusatileQuality	PusatileQuality	
24	MeasureActivePeriod	MeasureActivePeriod	
25	ObservedValue	ObservedValue	
26	Plethysmogram	Plethysmogram	
27	SamplePeriod	SamplePeriod	
28	SampleValueArray	SampleValueArray	
29	SampleValue	SampleValue	
30	PulsatileCharacteristic	PulsatileCharacteristic	

12.4.2. SetTime

(1) Description

Set time on a device.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/PulseOximeter/Service/SetTime

(3) Input parameters

Table 12.4.2-1: SetTime Service Input parameters

	Parameter	State Variables	Description
1	dateAndTime	DateAndTime	Set time on a Pulse Oximeter device.

(4) Output parameters

None.

12.4.3. GetIcon

(1) Description

Obtain an icon image data of a device.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/PulseOximeter/Service/GetIcon

(3) Input parameters

Table 12.4.3-1: GetIcon Service Input parameters

	Parameter	State Variables	Data Type	Description
1	url	-	string	Specify URL of Icon data.

(4) Output parameters

Table 12.4.3-2: GetIcon Service Output parameters

	Parameter	State Variables	Data Type	Description
1	mimeType	-	string	Specify MIME media type of the icon data.icon data.
2	base64Data	-	base64Binary	Set the icon data encode by BASE 64.

12.5. Meta Data

12.5.1. Device Meta Data

The pulse oximeter device Meta Data Template is shown in the followings.

Descriptions in Red Italic Character : show values related to each pulse oximeter devices.

```
<?xml version="1.0"?>
<Device  type="http://www.pucc.jp/2012/03/Device/IEEE11073/PulseOximeter"
          id="global unique ID for this device"  name="short user-friendly title">
  <Specification>
    <URLBase>base URL for all relative URLs</URLBase>
    <Manufacturer>manufacturer name</Manufacturer>
    <ManufacturerURL>URL to manufacturer site</ManufacturerURL>
    <ManufactureDate>date of manufacture</ManufactureDate>
    <ModelDescription>long user-friendly title</ModelDescription>
    <ModelName>model name</ModelName>
    <ModelNumber>model number</ModelNumber>
    <ModelURL>URL to model site</ModelURL>
    <SerialNumber>manufacturer's serial number</SerialNumber>
    <UDN>uuid:UUID</UDN>
    <UPC>Universal Product Code</UPC>
    <IconList>
      <Icon>
        <Mimetype>image/format</Mimetype>
        <Width>horizontal pixels</Width>
        <Height>vertical pixels</Height>
        <Depth>color depth</Depth>
        <Url>URL to icon</Url>
      </Icon>
      XML to declare other icons, if any, go here
    </IconList>
  </Specification>
  <StateVariableList>
    <StateVariable  name="ProductionSpec"  datatype="array"  sendEvents="no">
     <StateVariable  name="ProdSpecEntry"  datatype="struct"  sendEvents="no">
      <StateVariable  name="SpecType"  datatype="string"  sendEvents="no"/>
      <StateVariable  name="ComponentId"  datatype="string"  sendEvents="no"/>
      <StateVariable  name="ProdSpec"  datatype="string"  sendEvents="no"/>
     </StateVariable>
    </StateVariable>
    <StateVariable  name="Version"  datatype="integer"  sendEvents="no"/>
    <StateVariable  name="DateAndTime"  datatype="dateTime"  sendEvents="no"/>
    <StateVariable  name="PersonId"  datatype="integer"  sendEvents="yes"/>
    <StateVariable  name="MeasurementTime"  datatype="dateTime"  sendEvents="yes"/>
    <StateVariable  name="SpO2"  datatype="struct"  sendEvents="yes">
```

```
      <StateVariable name="TypeList" datatype="array" sendEvents="no">
       <StateVariable name="Type" datatype="string" sendEvents="no">
        <AllowedValueList>
         <AllowedValue>fast-response</AllowedValue>
         <AllowedValue>slow-response</AllowedValue>
         <AllowedValue>spot-check</AllowedValue>
        </AllowedValueList>
       </StateVariable>
      </StateVariable>
      <StateVariable name="ObservedValue" datatype="float" unit="%" sendEvents="no">
       <StateVariable name="CurrentLimits" datatype="struct" sendEvents="no">
        <StateVariable name="Upper" datatype="float" sendEvents="no"/>
        <StateVariable name="Lower" datatype="float" sendEvents="no"/>
       </StateVariable>
      </StateVariable>
     </StateVariable>
     <StateVariable name="PulseRate" datatype="struct" sendEvents="no">
      <StateVariable name="TypeList" datatype="array" sendEvents="no">
       <StateVariable name="Type" datatype="string" sendEvents="no">
        <AllowedValueList>
         <AllowedValue>fast-response</AllowedValue>
         <AllowedValue>slow-response</AllowedValue>
         <AllowedValue>spot-check</AllowedValue>
        </AllowedValueList>
       </StateVariable>
      </StateVariable>
      <StateVariable name="ObservedValue" datatype="float" unit="bpm" sendEvents="no">
       <StateVariable name="CurrentLimits" datatype="struct" sendEvents="no">
        <StateVariable name="Upper" datatype="float" sendEvents="no"/>
        <StateVariable name="Lower" datatype="float" sendEvents="no"/>
       </StateVariable>
      </StateVariable>
     </StateVariable>
     <StateVariable name="PulsatileQuality" datatype="struct" sendEvents="yes">
      <StateVariable name="MeasureActivePeriod" datatype="integer" sendEvents="no"/>
      <StateVariable name="ObservedValue" datatype="float" sendEvents="no"/>
     </StateVariable>
     <StateVariable name="Plethysmogram" datatype="struct" sendEvents="yes">
      <StateVariable name="SamplePeriod" datatype="integer" unit="s" sendEvents="no"/>
      <StateVariable name="SampleValueArray" datatype="array" sendEvents="no">
       <StateVariable name="SampleValue" datatype="float" sendEvents="no"/>
      </StateVariable>
     </StateVariable>
     <StateVariable name="PulsatileCharacteristic" datatype="string" sendEvents="yes">
      <AllowedValueList>
       <AllowedValue>pulse-qual-nominal</AllowedValue>
       <AllowedValue>pulse-qual-marginal</AllowedValue>
```

```
        <AllowedValue>pulse-qual-minimal</AllowedValue>
        <AllowedValue>pulse-qual-unacceptable</AllowedValue>
      </AllowedValueList>
    </StateVariable>
  </StateVariableList>
  <ServiceList>
    <Service   name="QueryStateVariable"
        type="http://www.pucc.jp/2012/03/Device/IEEE11073/PulseOximeter/Service/QueryStateVariable"/>
    <Service   name="SetTime"
        type="http://www.pucc.jp/2012/03/Device/IEEE11073/PulseOximeter/Service/SetTime"/>
    <Service   name="GetIcon"
        type="http://www.pucc.jp/2012/03/Device/IEEE11073/PulseOximeter/Service/GetIcon"/>
  </ServiceList>
  <PrimitiveDeviceList/>
  <EventConditionList/>
</Device>
```

12.5.2. Service Meta Data

The Service Meta Data Template of pulse oximeter is shown in the followings.

(1)QueryStateVariable Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon"
    type="http://www.pucc.jp/2012/03/Device/IEEE11073/PulseOximeter/Service/QueryStateVariable">
  <InputParameterList>
    <Parameter   name="ProductionSpec"   relatedStateVariable="ProductionSpec">
      <Parameter   name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
        <Parameter   name="SpecType" relatedStateVariable="SpecType"/>
        <Parameter   name="ComponentId" relatedStateVariable="ComponentId"/>
        <Parameter   name="ProdSpec"/>
      </Parameter>
    </Parameter>
    <Parameter name="Version" relatedStateVariable ="Version"/>
    <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
    <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
    <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
    <Parameter name="SpO2" relatedStateVariable ="SpO2">
      <Parameter name="TypeList" relatedStateVariable ="TypeList">
        <Parameter name="Type" relatedStateVariable ="Type"/>
      </Parameter>
      <Parameter name="ObservedValue" relatedStateVariable ="ObservedValue"/>
      <Parameter name="CurremtLimits" relatedStateVariable ="CurremtLimits">
        <Parameter name="Type" relatedStateVariable ="Type"/>
```

```
      </Parameter>
    </Parameter>
    <Parameter name="PulseRate" relatedStateVariable ="PulseRate">
     <Parameter name="TypeList" relatedStateVariable ="TypeList">
      <Parameter name="Type" relatedStateVariable ="Type"/>
     </Parameter>
     <Parameter name="ObservedValue" relatedStateVariable ="ObservedValue"/>
     <Parameter name="CurremtLimits" relatedStateVariable ="CurremtLimits">
      <Parameter name="Type" relatedStateVariable ="Type"/>
     </Parameter>
    </Parameter>
    <Parameter name="PulsatileQuality" relatedStateVariable ="PulsatileQuality">
     <Parameter name="MeasureActivePeriod" relatedStateVariable ="MeasureActivePeriod"/>
     <Parameter name="ObservedValue" relatedStateVariable ="ObservedValue"/>
    </Parameter>
    <Parameter name="Plethysmogram" relatedStateVariable ="Plethysmogram">
     <Parameter name="SamplePeriod" relatedStateVariable ="SamplePeriod"/>
     <Parameter name="SampleValueArray" relatedStateVariable ="SampleValueArray">
      <Parameter name="SampleValue" relatedStateVariable ="SampleValue"/>
     </Parameter>
    </Parameter>
    <Parameter name="PulsatileCharacteristic" relatedStateVariable ="PulsatileCharacteristic"/>
  </InputParameterList>
  <OutputParameterList>
    <Parameter    name="ProductionSpec"    relatedStateVariable="ProductionSpec">
     <Parameter    name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
      <Parameter    name="SpecType" relatedStateVariable="SpecType"/>
      <Parameter    name="ComponentId" relatedStateVariable="ComponentId"/>
      <Parameter    name="ProdSpec"/>
     </Parameter>
    </Parameter>
    <Parameter name="Version" relatedStateVariable ="Version"/>
    <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
    <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
    <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
    <Parameter name="SpO2" relatedStateVariable ="SpO2">
     <Parameter name="TypeList" relatedStateVariable ="TypeList">
      <Parameter name="Type" relatedStateVariable ="Type"/>
     </Parameter>
     <Parameter name="ObservedValue" relatedStateVariable ="ObservedValue"/>
     <Parameter name="CurremtLimits" relatedStateVariable ="CurremtLimits">
      <Parameter name="Type" relatedStateVariable ="Type"/>
     </Parameter>
    </Parameter>
    <Parameter name="PulseRate" relatedStateVariable ="PulseRate">
     <Parameter name="TypeList" relatedStateVariable ="TypeList">
      <Parameter name="Type" relatedStateVariable ="Type"/>
```

```
        </Parameter>
        <Parameter name="ObservedValue" relatedStateVariable ="ObservedValue"/>
        <Parameter name="CurremtLimits" relatedStateVariable ="CurremtLimits">
          <Parameter name="Type" relatedStateVariable ="Type"/>
        </Parameter>
      </Parameter>
      <Parameter name="PulsatileQuality" relatedStateVariable ="PulsatileQuality">
        <Parameter name="MeasureActivePeriod" relatedStateVariable ="MeasureActivePeriod"/>
        <Parameter name="ObservedValue" relatedStateVariable ="ObservedValue"/>
      </Parameter>
      <Parameter name="Plethysmogram" relatedStateVariable ="Plethysmogram">
        <Parameter name="SamplePeriod" relatedStateVariable ="SamplePeriod"/>
        <Parameter name="SampleValueArray" relatedStateVariable ="SampleValueArray">
          <Parameter name="SampleValue" relatedStateVariable ="SampleValue"/>
        </Parameter>
      </Parameter>
      <Parameter name="PulsatileCharacteristic" relatedStateVariable ="PulsatileCharacteristic"/>
    </OutputParameterList>
</Service>
```

(2)SetTime Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon"
      type="http://www.pucc.jp/2012/03/Device/IEEE11073/PulseOximeter/Service/SetTime">
    <InputParameterList>
      <Parameter name="dateAndTime" relatedStateVariable="DateAndTime"/>
    </InputParameterList>
    <OutputParameterList/>
</Service>
```

(3)GetIcon Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon"
      type="http://www.pucc.jp/2012/03/Device/IEEE11073/PulseOximeter/Service/GetIcon">
    <InputParameterList>
      <Parameter name="url" datatype="string"/>
    </InputParameterList>
    <OutputParameterList>
      <Parameter name="mimeType" datatype="string"/>
      <Parameter name="base64Data" datatype="base64Binary"/>
    </OutputParameterList>
</Service>
```

13. Glucose Meter Device

In this section, the glucose meter Device Meta Data is specified.

13.1. Device Model

The device model of a glucose meter device is shown below,

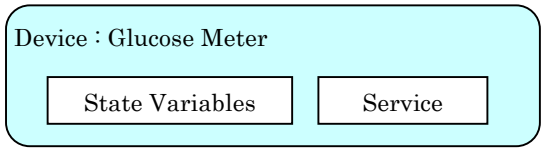


Figure 13.1-1. Device Model of a Glucose Meter Device

13.2. Device Type

The Device Type ID (URL form) of a glucose meter device is shown below,

http://www.pucc.jp/2012/03/Device/IEEE11073/GlucoseMeter

13.3. State Variables

The state variables of Glucose Meter device are shown in the following table.

Table 13.3-1: State Variables of Glucose Merter device (1/4)

	State Variable Name	Description	Data Type	Event
1	ProductionSpec	List of device manufacturer's informationation	array	No
2	ProdSpecEntry	Manufacture's informationmation	struct	No
3	SpecType	Information Type. Enable values are as follows, "unspecified" "part-number" "hw-revision" "sw-revision" "fw-revision" "protocol-revision" "prod-spec-gmdn"	string	No
4	ComponentID	Component ID	integer	No
5	ProdSpec	Manufacture's informationmation	integer	No
6	Version	Device Version. In the case of IEEE11073-10415, value SHOULD be "1"be "1"	integer	No
7	DateAndTime	Current date and time value indicated by a devicedevice	dateTime	No
8	PersonId	User's personal ID	integer	Yes
9	MeasurementTime	Last measurement time provided by a device	dateTime	Yes
10	Glucose	Glucose density	struct	Yes
11	SampleSource	Sample source of Glucose measurement. Enable values are as follows, "Capillary" "Venous" "Arterial"	string	No

Table 13.3-2:State Variables of Glucose Merter device (2/4)

	State Variable Name	Description	Data Type	Event
12	ReferenceMethod	Measurement reference method Enable values are as follows, "WholeBlood" "Plasma"	string	No
13	ObservedValue	Observed glucose density. “unit” property value SHOULD be either "mmol/L" or "mg/dL". “accuracy” property MAY be used for specifying the maximum deviation between measurement value and real value. Property value is described in float type.	string	No
14	HbA1c	HbA1c. “unit” property value SHOULD be “%”. “accuracy” property MAY be used for specifying the maximum deviation between measurement value and real value. Property value is described in float type.	string	Yes
15	Exercise	Values inputed by the user with Glucose Sensor to record the user’s activities for exercise management.	struct	Yes
16	MeasureActivePeriod	Measuring duration. ”unit” property value SHOULD be “s”.	integer	No
17	ExersiceValue	User input value to the glucose sensor device for recording the user’s exercise activities. ”unit” property value SHOULD be “%”.	float	No
18	Medication	Information structure of user input to the glucose sensor device for recording the user’s medication.	struct	Yes

Table 13.3-3:State Variables of Glucose Merter device (3/4)

	State Variable Name	Description	Data Type	Event
19	Type	Meication value type. Enable values are as follows, "Rapidacting" "Shortacting" "InterMediateacting" "Longacting" "Premix"	string	No
20	MedicationValue	User input to the glucose sensor device for recording the user's medication "unit" property value SHOULD be either "mg" or "ml".	struct	No
21	Carbohydrates	Information structure of user input to the glucose sensor device for recording the user's carbohyrdates directly related to the glucose density.	struct	Yes
22	Type	Valur type of Carbohydrates Enable values are as follows, "Breakfast" "Lunch" "Dinner" "Snack" "Drink" "Supper" "Brunch"	string	No
23	CarbohydratesValue	User input to the Glucose Sensor device for recording the user's carbohydrates. "unit" property value SHOULD be "g".	string	No

Table 13.3-4: State Variables of Glucose Merter device (4/4)

	State Variable Name	Description	Data Type	Event
23	Meal	Enable values are as follows, "Preprandial" "Postprandial" "Fasting" "Casual"	string	Yes
24	SampleLocation	Enable values are as follows, "Finger" "Ast" "Earlobe" "ControlSolution"	string	Yes
25	Tester	Enable values are as follows, "Self" "Hcp" "Lab"	string	Yes
26	Health	Enable values are as follows, "Minor" "Major" "Menses" "Stress" "None"	string	Yes

13.4. Service

Glucose Meter devicee services are shown in the following table.

Table 13.4-1: Glucose Meter devicee services

	Service	Description
1	QueryStateVariable	Query Glucose Meter devicee State Variables.
2	SetTime	Set time on a Glucose Meter device.
3	GetIcon	Get Icon image of Glucose Meter device

The followings are each service's description.

13.4.1. QueryStateVariable

(1) Description

Query Glucose Meter device's State Variables.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/GlucoseMeter/Service/QueryStateVariable

(3) Input parameters

Table 13.4.1-1: QueryStateVariable Service Input parameters

	Parameter	State Variables	Description
1	ProductionSpec	ProductionSpec	Values SHOULD NOT specified for query.
2	ProdSpecEntry	ProdSpecEntry	
3	SpecType	SpecType	
4	ComponentId	ComponentId	
5	ProdSpec	ProdSpec	
6	Version	Version	
7	DateAndTime	DateAndTime	
8	PersonId	PersonId	
9	MeasurementTime	MeasurementTime	
10	Glucose	Glucose	
11	SampleSource	SampleSource	
12	ReferenceMethod	ReferenceMethod	
13	ObservedValue	ObservedValue	
14	HbA1c	HbA1c	
15	Excercise	Excercise	
16	MeasureActivePeriod	MeasureActivePeriod	
17	ExersiceValue	ExersiceValue	
18	Medication	Medication	
19	Carbohydrates	Carbohydrates	
20	Type	Type	
21	CarbohydratesValue	CarbohydratesValue	
22	Meal	Meal	
23	SampleLocation	SampleLocation	

(4) Output parameters

Table 13.4.1-2: QueryStateVariable Service Output parameters

	Parameter	State Variables	Description
1	ProductionSpec	ProductionSpec	Value of the specified parameter as input SHOULD be included in output.
2	ProdSpecEntry	ProdSpecEntry	
3	SpecType	SpecType	
4	ComponentId	ComponentId	
5	ProdSpec	ProdSpec	
6	Version	Version	
7	DateAndTime	DateAndTime	
8	PersonId	PersonId	
9	MeasurementTime	MeasurementTime	
10	Glucose	Glucose	
11	SampleSource	SampleSource	
12	ReferenceMethod	ReferenceMethod	
13	ObservedValue	ObservedValue	
14	HbA1c	HbA1c	
15	Excercise	Excercise	
16	MeasureActivePeriod	MeasureActivePeriod	
17	ExersiceValue	ExersiceValue	
18	Medication	Medication	
19	Carbohydrates	Carbohydrates	
20	Type	Type	
21	CarbohydratesValue	CarbohydratesValue	
22	Meal	Meal	
23	SampleLocation	SampleLocation	

13.4.2. SetTime

(1) Description

Set time on a device.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/GlucoseMeter/Service/SetTime

(3) Input parameters

Table 13.4.2-1: SetTime Service Input parameters

	Parameter	State Variables	Description
1	dateAndTime	DateAndTime	Set time on a Glucose Meter device.

(4) Output parameters

None.

13.4.3. GetIcon

(1) Description

Obtain an icon image data of a device.

(2) Service Identifier

http://www.pucc.jp/2012/03/Device/IEEE11073/GlucoseMeter/Service/GetIcon

(3) Input parameters

Table 13.4.3-1: GetIcon Service Input parameters

	Parameter	State Variables	Data Type	Description
1	url	-	string	Specify URL of Icon data.

(4) Output parameters

Table 13.4.3-2: GetIcon Service Output parameters

	Parameter	State Variables	Data Type	Description
1	mimeType	-	string	Specify MIME media type of the icon data.icon data.
2	base64Data	-	base64Binary	Set the icon data encode by BASE 64.

13.5. Meta Data

13.5.1. Device Meta Data

The Glucose Meter device Meta Data Template is shown in the followings.

Descriptions in Red Italic Character : show values related to each Glucose Meter devices.

```
<?xml version="1.0"?>
<Device  type="http://www.pucc.jp/2012/03/Device/IEEE11073/GlucoseMeter"
          id="global unique ID for this device"  name="short user-friendly title">
  <Specification>
    <URLBase>base URL for all relative URLs</URLBase>
    <Manufacturer>manufacturer name</Manufacturer>
    <ManufacturerURL>URL to manufacturer site</ManufacturerURL>
    <ManufactureDate>date of manufacture</ManufactureDate>
    <ModelDescription>long user-friendly title</ModelDescription>
    <ModelName>model name</ModelName>
    <ModelNumber>model number</ModelNumber>
    <ModelURL>URL to model site</ModelURL>
    <SerialNumber>manufacturer's serial number</SerialNumber>
    <UDN>uuid:UUID</UDN>
    <UPC>Universal Product Code</UPC>
    <IconList>
      <Icon>
        <Mimetype>image/format</Mimetype>
        <Width>horizontal pixels</Width>
        <Height>vertical pixels</Height>
        <Depth>color depth</Depth>
        <Url>URL to icon</Url>
      </Icon>
      XML to declare other icons, if any, go here
    </IconList>
  </Specification>
  <StateVariableList>
    <StateVariable  name="ProductionSpec"  datatype="array"  sendEvents="no">
     <StateVariable  name="ProdSpecEntry"  datatype="struct"  sendEvents="no">
      <StateVariable  name="SpecType"  datatype="string"  sendEvents="no"/>
      <StateVariable  name="ComponentId"  datatype="string"  sendEvents="no"/>
      <StateVariable  name="ProdSpec"  datatype="string"  sendEvents="no"/>
     </StateVariable>
    </StateVariable>
    <StateVariable  name="Version"  datatype="integer"  sendEvents="no"/>
    <StateVariable  name="DateAndTime"  datatype="dateTime"  sendEvents="no"/>
    <StateVariable  name="PersonId"  datatype="integer"  sendEvents="yes"/>
    <StateVariable  name="MeasurementTime"  datatype="dateTime"  sendEvents="yes"/>
    <StateVariable  name="Glucose"  datatype="struct" sendEvents="yes">
```

```
    <StateVariable  name="SampleSource"  datatype="string" sendEvents="no">
     <AllowedValueList>
      <AllowedValue>Capillary</AllowedValue>
      <AllowedValue>Venous</AllowedValue>
      <AllowedValue>Arterial</AllowedValue>
     </AllowedValueList>
    </StateVariable>
    <StateVariable  name="ReferenceMethod"  datatype="string" sendEvents="no">
     <AllowedValueList>
      <AllowedValue>WholeBlood</AllowedValue>
      <AllowedValue>Plasma</AllowedValue>
     </AllowedValueList>
    </StateVariable>
    <StateVariable  name="ObservedValue"  datatype="float" unit="mmol/L" sendEvents="no"/>
   </StateVariable>
   <StateVariable  name="HbA1c"  datatype="float" unit="%" sendEvents="yes"/>
   <StateVariable  name="Excercise"  datatype="struct" sendEvents="yes">
    <StateVariable  name="MeasureActivePeriod"  datatype="integer" unit="s" sendEvents="no"/>
    <StateVariable  name="ExerciseValue"  datatype="float" unit="%" sendEvents="no">
     <AllowedValueList>
      <AllowedValue>Capillary</AllowedValue>
      <AllowedValue>Venous</AllowedValue>
      <AllowedValue>Arterial</AllowedValue>
     </AllowedValueList>
    </StateVariable>
   </StateVariable>
   <StateVariable  name="Medication"  datatype="struct" sendEvents="yes">
    <StateVariable  name="Type"  datatype="string"sendEvents="no">
     <AllowedValueList>
      <AllowedValue>Rapidacting</AllowedValue>
      <AllowedValue>Shortacting</AllowedValue>
      <AllowedValue>InterMediateacting</AllowedValue>
      <AllowedValue>Longacting</AllowedValue>
      <AllowedValue>Premix</AllowedValue>
     </AllowedValueList>
    </StateVariable>
    <StateVariable  name="MedicationValue"  datatype="float" unit="mg" sendEvents="no"/>
   </StateVariable>
   <StateVariable  name="Carbohydrates"  datatype="struct" sendEvents="yes">
    <StateVariable  name="Type"  datatype="string"sendEvents="no">
     <AllowedValueList>
      <AllowedValue>Breakfast</AllowedValue>
      <AllowedValue>Lunch</AllowedValue>
      <AllowedValue>Dinner</AllowedValue>
      <AllowedValue>Snack</AllowedValue>
      <AllowedValue>Drink</AllowedValue>
      <AllowedValue>Supper</AllowedValue>
```

```
        <AllowedValue>Brunch</AllowedValue>
       </AllowedValueList>
      </StateVariable>
      <StateVariable    name="CarbohydratesValue"    datatype="float" unit="g" sendEvents="no"/>
    </StateVariable>
    <StateVariable    name="Meal"    datatype="string" sendEvents="yes">
     <AllowedValueList>
      <AllowedValue>Preprandial</AllowedValue>
      <AllowedValue>Postprandial</AllowedValue>
      <AllowedValue>Fasting</AllowedValue>
      <AllowedValue>Casual</AllowedValue>
     </AllowedValueList>
    </StateVariable>
    <StateVariable    name="SampleLocation"    datatype="string" sendEvents="yes">
     <AllowedValueList>
      <AllowedValue>Finger</AllowedValue>
      <AllowedValue>Ast</AllowedValue>
      <AllowedValue>Earlobe</AllowedValue>
      <AllowedValue>ControlSolution</AllowedValue>
     </AllowedValueList>
    </StateVariable>
    <StateVariable    name="Tester"    datatype="string" sendEvents="yes">
     <AllowedValueList>
      <AllowedValue>Self</AllowedValue>
      <AllowedValue>Hcp</AllowedValue>
      <AllowedValue>Lab</AllowedValue>
     </AllowedValueList>
    </StateVariable>
    <StateVariable    name="Health"    datatype="string" sendEvents="yes">
     <AllowedValueList>
      <AllowedValue>Major</AllowedValue>
      <AllowedValue>Minor</AllowedValue>
      <AllowedValue>Menses</AllowedValue>
      <AllowedValue>Stress</AllowedValue>
      <AllowedValue>None</AllowedValue>
     </AllowedValueList>
    </StateVariable>

  </StateVariableList>
  <ServiceList>
    <Service    name="QueryStateVariable"
        type="http://www.pucc.jp/2012/03/Device/IEEE11073/GlucoseMeter/Service/QueryStateVariable"/>
    <Service    name="SetTime"
        type="http://www.pucc.jp/2012/03/Device/IEEE11073/GlucoseMeter/Service/SetTime"/>
    <Service    name="GetIcon"
        type="http://www.pucc.jp/2012/03/Device/IEEE11073/GlucoseMeter/Service/GetIcon"/>
  </ServiceList>
```

```
    <PrimitiveDeviceList/>
    <EventConditionList/>
</Device>
```

13.5.2. Service Meta Data

The Service Meta Data Template of glucose meter is shown in the followings.

(1)QueryStateVariable Service Meta Data Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon"
      type="http://www.pucc.jp/2012/03/Device/IEEE11073/GlucoseMeter/Service/QueryStateVariable">
   <InputParameterList>
      <Parameter    name="ProductionSpec"    relatedStateVariable="ProductionSpec">
        <Parameter    name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
          <Parameter    name="SpecType" relatedStateVariable="SpecType"/>
          <Parameter    name="ComponentId" relatedStateVariable="ComponentId"/>
          <Parameter    name="ProdSpec"/>
        </Parameter>
      </Parameter>
      <Parameter name="Version" relatedStateVariable ="Version"/>
      <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
      <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
      <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
      <Parameter name="Glucose" relatedStateVariable ="Glucose">
        <Parameter name="SampleSource" relatedStateVariable ="SampleSource"/>
        <Parameter name="ReferenceMethod" relatedStateVariable ="ReferenceMethod"/>
        <Parameter name="ObservedValue" relatedStateVariable ="ObservedValue"/>
      </Parameter>
      <Parameter name="HbA1c" relatedStateVariable ="HbA1c"/>
      <Parameter name="Excercise" relatedStateVariable ="Excercise">
        <Parameter name="MeasureActivePeriod" relatedStateVariable ="MeasureActivePeriod"/>
        <Parameter name="ExcerciseValue" relatedStateVariable ="ExcerciseValue"/>
      </Parameter>
      <Parameter name="Medication" relatedStateVariable ="Medication">
        <Parameter name="Type" relatedStateVariable ="Type"/>
        <Parameter name="MedicationValue" relatedStateVariable ="MedicationValue"/>
      </Parameter>
      <Parameter name="Carbohydrates" relatedStateVariable ="Carbohydrates">
        <Parameter name="Type" relatedStateVariable ="Type"/>
        <Parameter name="CarbohydratesValue" relatedStateVariable ="CarbohydratesValue"/>
      </Parameter>
      <Parameter name="Meal" relatedStateVariable ="Meal"/>
      <Parameter name="SampleLocation" relatedStateVariable ="SampleLocation"/>
      <Parameter name="Tester" relatedStateVariable ="Tester"/>
      <Parameter name="Health" relatedStateVariable ="Health"/>
   </InputParameterList>
   <OutputParameterList>
      <Parameter    name="ProductionSpec"    relatedStateVariable="ProductionSpec">
```

```
      <Parameter    name="ProdSpecEntry" relatedStateVariable="ProdSpecEntry">
        <Parameter    name="SpecType" relatedStateVariable="SpecType"/>
        <Parameter    name="ComponentId" relatedStateVariable="ComponentId"/>
        <Parameter    name="ProdSpec"/>
      </Parameter>
    </Parameter>
    <Parameter name="Version" relatedStateVariable ="Version"/>
    <Parameter name="DateAndTime" relatedStateVariable ="DateAndTime"/>
    <Parameter name="PersonId" relatedStateVariable ="PersonId"/>
    <Parameter name="MeasurementTime" relatedStateVariable ="MeasurementTime"/>
    <Parameter name="Glucose" relatedStateVariable ="Glucose">
      <Parameter name="SampleSource" relatedStateVariable ="SampleSource"/>
      <Parameter name="ReferenceMethod" relatedStateVariable ="ReferenceMethod"/>
      <Parameter name="ObservedValue" relatedStateVariable ="ObservedValue"/>
    </Parameter>
    <Parameter name="HbA1c" relatedStateVariable ="HbA1c"/>
    <Parameter name="Excercise" relatedStateVariable ="Excercise">
      <Parameter name="MeasureActivePeriod" relatedStateVariable ="MeasureActivePeriod"/>
      <Parameter name="ExcerciseValue" relatedStateVariable ="ExcerciseValue"/>
    </Parameter>
    <Parameter name="Medication" relatedStateVariable ="Medication">
      <Parameter name="Type" relatedStateVariable ="Type"/>
      <Parameter name="MedicationValue" relatedStateVariable ="MedicationValue"/>
    </Parameter>
    <Parameter name="Carbohydrates" relatedStateVariable ="Carbohydrates">
      <Parameter name="Type" relatedStateVariable ="Type"/>
      <Parameter name="CarbohydratesValue" relatedStateVariable ="CarbohydratesValue"/>
    </Parameter>
    <Parameter name="Meal" relatedStateVariable ="Meal"/>
    <Parameter name="SampleLocation" relatedStateVariable ="SampleLocation"/>
    <Parameter name="Tester" relatedStateVariable ="Tester"/>
    <Parameter name="Health" relatedStateVariable ="Health"/>    </OutputParameterList>
</Service>
```

(2)SetTime Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon"
      type="http://www.pucc.jp/2012/03/Device/IEEE11073/GlucoseMeter/Service/SetTime">
   <InputParameterList>
      <Parameter name="dateAndTime" relatedStateVariable="DateAndTime"/>
   </InputParameterList>
   <OutputParameterList/>
</Service>
```

(3)GetIcon Service Meta Data

```
<?xml version="1.0" ?>
<Service name="GetIcon"
      type="http://www.pucc.jp/2012/03/Device/IEEE11073/GlucoseMeter/Service/GetIcon">
   <InputParameterList>
      <Parameter name="url" datatype="string"/>
   </InputParameterList>
   <OutputParameterList>
      <Parameter name="mimeType" datatype="string"/>
      <Parameter name="base64Data" datatype="base64Binary"/>
   </OutputParameterList>
</Service>
```

Appendix A. Version History

Document number	Date	Note
PUCC Metadata Specification – IEEE11073 Devices	28 Oct, 2009	Version 0.1
PUCC Metadata Specification – IEEE11073 Devices	17 Mar, 2010	Version 0.2
PUCC Metadata Specification – IEEE11073 Devices	22 Mar, 2012	Version 1.0