



Health informatics — Personal health device communication

Part 20601: Application profile — Optimized exchange protocol

TECHNICAL CORRIGENDUM 1

Informatique de santé — Communication entre dispositifs de santé personnels —

Partie 20601: Profil d'application — Protocole d'échange optimisé

RECTIFICATIF TECHNIQUE 1

Technical Corrigendum 1 to ISO/IEEE 11073-20601 was prepared by the IEEE 11073 Standards Committee of the IEEE Engineering in Medicine and Biology Society (as IEEE Std 11073-20601-2014/Cor 1:2015). It was adopted by Technical Committee ISO/TC 215, *Health informatics*, in parallel with its approval by the ISO member bodies, under the “fast-track procedure” defined in the Partner Standards Development Organization cooperation agreement between ISO and IEEE. IEEE is responsible for the maintenance of this document with participation and input from ISO member bodies.

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Health informatics—Personal health device communication

Part 20601: Application profile— Optimized Exchange Protocol

Corrigendum 1

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IEEE 11073™ Standards Committee
of the
IEEE Engineering in Medicine and Biology Society

Approved 3 September 2015

IEEE-SA Standards Board

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Abstract: Within the context of the ISO/IEEE 11073 family of standards for device communication, this standard defines a common framework for making an abstract model of personal health data available in transport-independent transfer syntax required to establish logical connections between systems and to provide presentation capabilities and services needed to perform communication tasks. The protocol is optimized to personal health usage requirements and leverages commonly used methods and tools wherever possible.

This corrigendum removes the ambiguities and corrects the wrong nomenclature codes and qualifier status that have been identified in IEEE Std 11073-20601-2014 to improve implementation of the standard in an interoperable fashion.

Keywords: IEEE 11073™, IEEE 11073-20601™, medical device communication, personal health devices

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PDF: 978-0-7381-9995-5 STD20427
Print: 978-0-7381-9996-2 STDPD20427

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Introduction

This introduction is not part of IEEE Std 11073-20601™-2014/Cor 1-2015, Health informatics—Personal health device communication—Part 20601: Application profile—Optimized Exchange Protocol—Corrigendum 1.

ISO and IEEE 11073 standards enable communication between medical devices and external computer systems. This standard and corresponding IEEE 11073-104xx standards address a need for a simplified and optimized communication approach for personal health devices, which may or may not be regulated devices. These standards align with, and draw upon, the existing clinically focused standards to provide easy management of data from either a clinical or personal health device.

This document addresses a need for an openly defined, independent standard for converting the collected information into an interoperable transmission format so the information can be exchanged between agents and managers.

This standard removes the ambiguities and corrects the wrong nomenclature codes and qualifier status that have been identified in IEEE Std 11073-20601-2014 to improve implementation of the standard in an interoperable fashion.

Contents

6. Personal health device DIM	2
6.3 Personal health object class definitions	2
7. Personal health device service model	4
7.4 Specific application of object access EVENT REPORT services for personal health devices	4
8. Communication model	5
8.7 Associating procedure	5
8.9 Operating procedure	5
Annex A (normative) ASN.1 definitions	7
A.4 ACTION-method-related data types	7
A.11 Data types for new object attributes and object services	7
Annex I (normative) Nomenclature codes	9

Health informatics—Personal health device communication

Part 20601: Application profile— Optimized Exchange Protocol

Corrigendum 1

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6. Personal health device DIM

6.3 Personal health object class definitions

Change Source-Handle-Reference and Source-Handle-Reference-List rows in Table 6 as shown:

Table 6—Metric Attributes

Attribute name	Attribute ID	Attribute type	Remark	Qualifiers
Source-Handle-Reference	MDC_ATTR_SOURCE_HANDLE_REF	HANDLE	This attribute establishes a relation of this object instance to a source object (e.g., pulse references sourcing SpO2). This attribute is used whenever it is required to model an explicit relation between object instances to define dependencies. The usage of this attribute is defined by device specializations. A metric object may contain one of Source-Handle-Reference or Source-Handle-Reference-List, but not both. <u>If a measurement reports a Source-Handle-Reference or Source-Handle-Reference-List attribute, the measurement from the object(s) that it references shall be sent by the agent to the manager must have been sent prior to the sending of this measurement.</u>	Optional Dynamic
Source-Handle-Reference-List	MDC_ATTR_SOURCE_HANDLE_REF_LIST	HANDLE List	This attribute establishes a relation of this object instance to more than one source objects (e.g., body mass index (BMI) references sourcing Height and Weight). This attribute is used whenever it is required to model an explicit relation between object instances to define dependencies. The usage of this attribute is defined by device specializations. A metric object may contain one of Source-Handle-Reference or Source-Handle-Reference-List, but not both. <u>If a measurement reports a Source-Handle-Reference or Source-Handle-Reference-List attribute, the measurement from the object(s) that it references shall be sent by the agent to the manager must have been sent prior to the sending of this measurement.</u>	Optional Dynamic

6.3.7 PM-store class

6.3.7.3 PM-store class attributes

Delete the following text:

The attributes Handle and PM-Store-Capab are part of the agent configuration; therefore, the manager knows the corresponding attribute values after the Configuring procedure.

6.3.7.4 PM-store object methods

Change the first paragraph after Table 11 as shown:

If an agent supports the PM-store class, the support of the ~~Get-Segment-Info or Get-Segment-Id-List~~ methods is mandatory, and support of the Trig-Segment-Data-Xfer method is mandatory. Support for the Clear-Segments ~~and Get-Segment-Id-List~~ method is optional and is indicated in the PM-Store-Capab attribute.

Delete text in Get-Segment-Info as shown:

— **Get-Segment-Info:**

This method allows the manager to retrieve PM-segment attributes of one or more PM-segments, with the exception of the Fixed-Segment-Data attribute, which contains the actual stored data and is retrieved by using the Trig-Segment-Data-Xfer method. In particular, the Get-Segment-Info method allows the manager to retrieve the attributes and their data contents from the PM-segment object instances identified by the SegmSelection parameter.

The agent shall support the all-segments choice in the SegmSelection action-info-args of the Get-Segment-Info method. The agent may support the segm-id-list and/or abs-time-range and/or bo-time-range choice in the SegmSelection action-info-args of the Get-Segment-Info method. In this case the agent shall set the pmsc-segm-id-list-select and/or pmsc-abs-time-select flag in the PM-Store-Capab attribute. If the manager sends the Get-Segment-Info method with the choice that the agent does not support, the agent shall reply with an unsupported-choice error (roer).

For PM-segment info returned by time, the segments are selected using the same mechanism as described under Clear-Segments.

If the manager supports sending the Get-Segment-Info method, the manager shall support at least the choice all-segments in the SegmSelection action-info-args of the Get-Segment-Info method. The manager may support additional choices.

If a standard configuration contains any PM-Store object, the manager must send Get-Segment-info or Get-Segment-Id-List at the beginning of accessing any PM-Store object.

If no PM-Segment matches the selection criteria in the SegmSelection action-info-args so that no PM-segments are found by the action, then this is not an error, a normal response is sent, and the segment info list will just be empty.

If the choice of SegmSelection in the Get-Segment-Info method is segm-id-list and the segm-id-list is empty, then the response shall be a segment-info-list that is empty.

~~If the agent supports the Get-Segment-Info method, the agent shall set the pmsc-get-segm-info-sup flag in the PM-Store-Capab attribute.~~

Insert text in Get-Segment-Id-List as shown:

— **Get-Segment-Id-List**

This method allows the manager to retrieve a list of the instance numbers of all the PM-segments of a PM-store. In particular, the Get-Segm-Id-List method allows the manager to then retrieve the attributes of selected PM-segment object instances and their data contents without needing to retrieve information of all PM-segments. This also allows the manager to retrieve multiple PM-segments as a series of requests.

If a standard configuration contains any PM-Store object, the manager must send Get-Segment-Info or Get-Segment-Id-List at the beginning of accessing any PM-Store object.

If the agent supports the Get-Segment-Id-List method, the agent shall set the pmsc-get-segm-id-list-sup flag in the PM-Store-Capab attribute.

If the agent supports the Get-Segment-Id-List method, the agent shall also support the Get-Segment-Info method with the segm-id-list choice in the SegmSelection action-info-args.

7. Personal health device service model

7.4 Specific application of object access EVENT REPORT services for personal health devices

7.4.3 Configuration event report

7.4.3.2 Agent device configuration

Change the second paragraph as shown:

The MDS object is not considered part of the configuration. A manager reassociating with an agent offering the same Dev-Configuration-Id cannot expect the MDS attribute values to be the same; for example, an agent may clear the mds-time-mgr-set-time ~~manager-set-time~~ bit as its clock has already been set.