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Health informatics — Device interoperability —

Part 10471:

Personal Health Device Communication — Device Specialization- Independent Living Activity Hub

ISO/TC 215

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This second edition cancels and replaces the first edition (ISO/IEEE 11073-10471:2010), which has been technically revised.

The main changes are as follows:

- added current value sensors (temperature, humidity, utility usage);
- added humidity alert sensor;
- added support for location sensors;
- added support for Base-Offset-Time;

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- added new location identifiers;
- incorporated location identifiers from ZigBee Home Automation and Health Care profiles;
- added new appliance identifiers;
- changed from bit string to simple OIDs to report events;
- updated the example to simple OID;
- changed supplementary types to have upper 11 bits for location and lower 5 bits for number to support more codes within partition;
- updated the version of this device specialization;
- updated the association details based on new version;
- updated the wording in 6.3 regarding the Not Allowed and Observational;
- added systematic names;
- tamper detected flag made a general health status flag for all sensors;
- enumeration codes provided to other systems (ZigBee);
- location RefId discriminator changed from parentheses ((3)->_3);
- encounter object added.

A list of all parts in the ISO 11073 series can be found on the ISO website.

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Abstract: Within the context of the ISO/IEEE 11073 family of standards for device communication, a normative definition of communication between personal telehealth independent living activity hub devices and compute engines (e.g., cell phones, personal computers, personal health appliances, set top boxes) in a manner that enables plug-and-play interoperability is established in this standard. Appropriate portions of existing standards, including ISO/IEEE 11073 terminology, information models, application profile standards, and transport standards are leveraged. The use of specific term codes, formats, and behaviors in telehealth environments restricting optionality in base frameworks in favor of interoperability are specified. A common core of communication functionality for personal telehealth independent living activity hubs is defined in this standard.

Keywords: IEEE 11073-10471™, independent living activity hub, medical device communication, personal health devices

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Introduction

This introduction is not part of IEEE Std 11073-10471-2023, IEEE Standard for Health informatics—Device Interoperability—Part 10471: Personal health device communication—Device specialization—Independent living activity hub.

ISO/IEEE 11073 standards enable communication between medical devices and external computer systems. This document uses the optimized framework created in ISO/IEEE 11073:20601 and describes a specific, interoperable communication approach for the Independent Living Activity Hub of personal health devices. These standards align with and draw on the existing clinically focused standards to provide support for communication of data from clinical or personal health devices (PHDs).

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