

First edition
2010-05-01

Health informatics — Point-of-care medical device communication —

Part 10471: Device specialization — Independant living activity hub

*Informatique de santé — Communication entre dispositifs médicaux
sur le site des soins —*

*Partie 10471: Spécialisation des dispositifs — Concentrateur d'activité
vivante indépendante*



Reference number
ISO/IEEE 11073-10471:2010(E)

© ISO 2010
© IEEE 2010

PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. Neither the ISO Central Secretariat nor IEEE accepts any liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies and IEEE members. In the unlikely event that a problem relating to it is found, please inform the ISO Central Secretariat or IEEE at the address given below.



COPYRIGHT PROTECTED DOCUMENT

© ISO 2010
© IEEE 2010

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO or IEEE at the respective address below.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Institute of Electrical and Electronics Engineers, Inc.
3 Park Avenue, New York • NY 10016-5997, USA
E-mail stds.ipr@ieee.org
Web www.ieee.org

Published in Switzerland

Contents	Page
Foreword.....	v
Introduction.....	vii
1. Overview.....	1
1.1 Scope.....	1
1.2 Purpose.....	2
1.3 Context.....	2
2. Normative references	2
3. Definitions, acronyms, and abbreviations	2
3.1 Definitions.....	3
3.2 Acronyms and abbreviations.....	3
4. Introduction to ISO/IEEE 11073 personal health devices.....	3
4.1 General.....	3
4.2 Introduction to IEEE Std 11073-20601 modeling constructs.....	4
5. Independent living activity hub device concepts and modalities	5
5.1 General.....	5
5.2 Concepts.....	5
5.3 Collected data.....	5
6. Independent living activity hub domain information model	7
6.1 Overview	7
6.2 Class extensions	7
6.3 Object instance diagram.....	7
6.4 Types of configuration	9
6.5 MDS object	10
6.6 Numeric objects	13
6.7 Real-time sample array objects	13
6.8 Enumeration objects.....	13
6.9 PM-store objects	26
6.10 Scanner objects	26
6.11 Class extension objects	26
6.12 Independent living activity hub information model extensibility rules.....	26
7. Independent living activity hub service model	27
7.1 General.....	27
7.2 Object access services	27
7.3 Object access event report services	29

8. Independent living activity hub communication model	29
8.1 Overview	29
8.2 Communication characteristics	29
8.3 Association procedure	30
8.4 Configuring procedure	31
8.5 Operating procedure	32
8.6 Time synchronization	32
9. Test associations	32
9.1 Behavior with standard configuration	33
9.2 Behavior with extended configurations	33
10. Conformance	33
10.1 Applicability	33
10.2 Conformance specification	33
10.3 Levels of conformance	34
10.4 ICSs	34
Annex A (informative) Bibliography	39
Annex B (normative) Any additional ASN.1 definitions	40
Annex C (normative) Allocation of identifiers	43
Annex D (informative) Message sequence examples	45
Annex E (informative) Protocol data unit examples	47

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

IEEE Standards documents are developed within the IEEE Societies and the Standards Coordinating Committees of the IEEE Standards Association (IEEE-SA) Standards Board. The IEEE develops its standards through a consensus development process, approved by the American National Standards Institute, which brings together volunteers representing varied viewpoints and interests to achieve the final product. Volunteers are not necessarily members of the Institute and serve without compensation. While the IEEE administers the process and establishes rules to promote fairness in the consensus development process, the IEEE does not independently evaluate, test, or verify the accuracy of any of the information contained in its standards.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is called to the possibility that implementation of this standard may require the use of subject matter covered by patent rights. By publication of this standard, no position is taken with respect to the existence or validity of any patent rights in connection therewith. ISO/IEEE is not responsible for identifying essential patents or patent claims for which a license may be required, for conducting inquiries into the legal validity or scope of patents or patent claims or determining whether any licensing terms or conditions provided in connection with submission of a Letter of Assurance or a Patent Statement and Licensing Declaration Form, if any, or in any licensing agreements are reasonable or non-discriminatory. Users of this standard are expressly advised that determination of the validity of any patent rights, and the risk of infringement of such rights, is entirely their own responsibility. Further information may be obtained from ISO or the IEEE Standards Association.

ISO/IEEE 11073-10471 was prepared by the 11073 Committee of the Engineering in Medicine and Biology Society of the IEEE (as IEEE Std 11073-10471-2008). 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. Both parties are responsible for the maintenance of this document.

ISO/IEEE 11073 consists of the following parts, under the general title *Health informatics — Personal health device communication* (text in parentheses gives a variant of subtitle):

- *Part 10101: (Point-of-care medical device communication) Nomenclature*
- *Part 10201: Domain information model*
- *Part 10404: Device specialization — Pulse oximeter*

- *Part 10407: Device specialization — Blood pressure monitor*
- *Part 10408: (Point-of-care medical device communication) Device specialization — Thermometer*
- *Part 10415: (Point-of-care medical device communication) Device specialization — Weighing scale*
- *Part 10417: Device specialization — Glucose meter*
- *Part 10471: (Point-of-care medical device communication) Device specialization — Independant living activity hub*
- *Part 20101: (Point-of-care medical device communication) Application profiles — Base standard*
- *Part 20601: (Point-of-care medical device communication) Application profile — Optimized exchange protocol*
- *Part 30200: (Point-of-care medical device communication) Transport profile — Cable connected*
- *Part 30300: (Point-of-care medical device communication) Transport profile — Infrared wireless*

This is a preview of "ISO/IEEE 11073-10471...". [Click here to purchase the full version from the ANSI store.](#)

Introduction

ISO/IEEE 11073 standards enable communication between medical devices and external computer systems. This document uses the optimized framework created in IEEE Std 11073-20601^a and describes a specific, interoperable communication approach for independent living activity hubs. These standards align with, and draw upon, the existing clinically focused standards to provide support for communication of data from clinical or personal health devices.

^a For information on references, see Clause 2.