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INTERNATIONAL STANDARD

ISO/IEEE 11073-10201

First edition
2004-12-15

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

Part 10201:

Domain information model

Informatique de santé — Communication entre dispositifs médicaux sur le site des soins —
Partie 10201: Modèle d'information du domaine

Reference number
ISO/IEEE 11073-10201:2004(E)

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Health informatics — Point-of-care medical device communication — Part 10201: Domain information model

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Approved 24 June 2004

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Abstract: Within the context of the ISO/IEEE 11073 family of standards for point-of-care (POC) medical device communication (MDC), this standard provides an abstract object-oriented domain information model that specifies the structure of exchanged information, as well as the events and services that are supported by each object. All elements are specified using abstract syntax (ASN.1) and may be applied to many different implementation technologies, transfer syntaxes, and application service models. Core subjects include medical, alert, system, patient, control, archival, communication, and extended services. Model extensibility is supported, and a conformance model and statement template is provided.

Keywords: abstract syntax, alarm, alert, ASN.1, information model, medical device communications, medical information bus, MIB, point-of-care, POC, object-oriented, patient, remote control

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Published 15 December 2004. Printed in the United States of America.

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Print: ISBN 0-7381-4089-9 SH95256
PDF: ISBN 0-7381-4090-2 SS95256

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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.

A pilot project between ISO and the IEEE has been formed to develop and maintain a group of ISO/IEEE standards in the field of medical devices as approved by Council resolution 43/2000. Under this pilot project, IEEE is responsible for the development and maintenance of these standards with participation and input from ISO member bodies.

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IEEE Introduction

This introduction is not part of ISO/IEEE 11073-10201:2004(E), Health informatics — Point-of-care medical device communication — Part 10201: Domain information model.

ISO/IEEE 11073 standards enable communication between medical devices and external computer systems. They provide automatic and detailed electronic data capture of patient vital signs information and device operational data. The primary goals are to:

— Provide real-time plug-and-play interoperability for patient-connected medical devices

— Facilitate the efficient exchange of vital signs and medical device data, acquired at the point-of-care, in all health care environments

“Real-time” means that data from multiple devices can be retrieved, time correlated, and displayed or processed in fractions of a second. “Plug-and-play” means that all the clinician has to do is make the connection — the systems automatically detect, configure, and communicate without any other human interaction.

“Efficient exchange of medical device data” means that information that is captured at the point-of-care (e.g., patient vital signs data) can be archived, retrieved, and processed by many different types of applications without extensive software and equipment support, and without needless loss of information. The standards are especially targeted at acute and continuing care devices, such as patient monitors, ventilators, infusion pumps, ECG devices, etc. They comprise a family of standards that can be layered together to provide connectivity optimized for the specific devices being interfaced.

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