

SLOVENSKI STANDARD
oSIST prEN ISO 11073-20701:2019
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Zdravstvena informatika - Medobratovalnost naprav - 20701. del: Komunikacija medicinskih naprav na mestu oskrbe - Storitveno usmerjena arhitektura in protokol za komunikacijo z medicinskimi napravami (ISO/IEEE FDIS 11073-20701:2019)

Health informatics - Device interoperability - Part 20701: Point-of-care medical device communication - Service oriented medical device exchange architecture and protocol binding (ISO/IEEE FDIS 11073-20701:2019)

Medizinische Informatik - Kommunikation patientennaher medizinischer Geräte - Teil 20701: Service-Orientierte Architektur und Protokoll für Medizingeräte-Kommunikation (ISO/IEEE FDIS 11073-20701)

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35.240.80	Uporabniške rešitve IT v zdravstveni tehniki	IT applications in health care technology
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Health informatics — Device interoperability —

Part 20701:
**Point-of-care medical device
communication — Service oriented
medical device exchange architecture
and protocol binding**

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Institute of Electrical and Electronics Engineers, Inc
3 Park Avenue, New York
NY 10016-5997, USA

Email: stds.ipr@ieee.org

Website: www.ieee.org

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Health informatics—Point-of-care medical device communication

Part 20701: Service-Oriented Medical Device Exchange Architecture and Protocol Binding

Sponsor

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of the
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Approved 27 September 2018

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ISO/IEEE FDIS 11073-20701:2019(E)

Abstract: Within the context of the ISO/IEEE 11073 family of standards for point-of-care (PoC) medical device communication, an architecture for service-oriented distributed PoC medical devices and medical IT systems is defined. This standard defines a binding of the Participant, Discovery, and Communication Model defined in IEEE Std 11073-10207™ to the profile for transport over Web Services defined in IEEE Std 11073-20702™. Moreover, a binding to Network Time Protocol (NTP) and Differentiated Services (DiffServ) is defined for time synchronization and transport Quality of Service requirements.

Keywords: alert systems, BICEPS, DiffServ, IEEE 11073-20701™, ISO/IEEE 11073, MDPWS, medical device communication, NTP, patient, point-of-care, remote control, service-oriented architecture

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ISO/IEEE FDIS 11073-20701:2019(E)

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Stefan Schlichting, *Subgroup Chair*

Bjoern Anderson
 Malcolm Clarke
 Todd Cooper
 Chris Courville
 Michael Faughn
 Kenneth Fuchs
 John Garguilo

Frank Golatowski
 David Gregorczyk
 Kai Hassing
 John Hatcliff
 Stefan Karl
 Martin Kasparick
 Koichiro Matsumoto
 Joerg-Uwe Meyer

Stephan Poehlsen
 Tracy Rausch
 John Rhoads
 Paul Schluter
 Masato Tanaka
 Eugene Vasserman
 Stan Wiley

The following members of the individual balloting committee voted on this standard. Balloters may have voted for approval, disapproval, or abstention.

Bjoern Andersen
 Lyle Bullock
 Carole Carey
 Keith Chow
 Sourav Dutta
 Kenneth Fuchs
 David Fuschi
 David Gregorczyk
 Randall Groves

Werner Hoelzl
 Noriyuki Ikeuchi
 Atsushi Ito
 Raj Jain
 Stefan Karl
 Piotr Karocki
 Martin Kasparick
 Thomas Kurihara
 Joerg-Uwe Meyer
 Beth Pumo

Stefan Schlichting
 Janek Schumann
 Sarah Shafqat
 Walter Struppler
 J. Wiley
 Jan Wittenber
 Oren Yuen
 Janusz Zalewski
 Daidi Zhong

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 Thomas Koshy
 Hung Ling
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Xiaohui Liu
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 Paul Nikolich
 Ronald C. Petersen
 Annette D. Reilly

Robby Robson
 Dorothy Stanley
 Mehmet Ulema
 Phil Wennblom
 Philip Winston
 Howard Wolfman
 Jingyi Zhou

*Member Emeritus

Introduction

This introduction is not part of IEEE Std 11073-20701-2018, Health Informatics—Point-of-care medical device communication—Part 20701: Service-Oriented Medical Device Exchange Architecture and Protocol Binding.

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 medical devices
- Facilitate the efficient exchange of vital signs and medical device data, acquired at the Point-of-Care (PoC), 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 to make the connection—the Participants automatically detect, configure, and communicate without any other human interaction.

“Efficient exchange of medical device data” means that information that is captured at the PoC (e.g., patient vital signs data) can be received, parsed, and interpreted by many different types of applications without unnecessary loss of information. The standards are especially targeted at acute, surgical, and continuing care devices, such as patient monitors, ventilators, infusion pumps, ECG devices, endoscopic camera system, insufflators, endoscopic light sources, dissectors, etc. They comprise a family of standards that can be bound to one another to provide optimized connectivity for devices at the Point-of-Care.

Within the context of the ISO/IEEE 11073 family of standards for PoC medical device communication, this standard defines an architecture for service-oriented distributed PoC medical devices and medical IT systems. It defines a binding of the Participant, Discovery, and Communication Model defined in IEEE Std 11073-10207 to the profile for transport over Web Services defined in IEEE Std 11073-20702. Moreover, a binding to Network Time Protocol (NTP) and Differentiated Services (DiffServ) is defined to satisfy time synchronization and transport Quality of Service requirements.