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Internet of things (IoT) – Interoperability for iot systems

Part 1: Framework

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The UK participation in its preparation was entrusted to Technical Committee IOT/1, Internet of Things.

A list of organizations represented on this committee can be obtained on request to its secretary.

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CONTENTS

FOREWORD 4
INTRODUCTION 5
1 Scope 6
2 Normative references 6
3 Terms and definitions 6
4 Abbreviated terms 8
5 Overview of Internet of Things interoperability 8
5.1 Descriptions 8
5.2 Considerations for Internet of Things interoperability 8
5.3 Internet of Things interoperability facet model 9
5.3.1 General 9
5.3.2 Transport interoperability 10
5.3.3 Syntactic interoperability 10
5.3.4 Semantic interoperability 11
5.3.5 Behavioural interoperability 11
5.3.6 Policy interoperability 11
5.3.7 Summary of Internet of Things interoperability facet model 11
5.4 Issues affecting Internet of Things interoperability 12
6 Consideration of the interoperability requirement for IoT characteristics 13
6.1 General descriptions 13
6.2 IoT system characteristics 13
6.2.1 Network communication 13
6.2.2 Self-description 13
6.2.3 Other IoT system characteristics not considered in interoperability 13
6.3 IoT component characteristics 14
6.3.1 Discoverability 14
6.3.2 Network connectivity 14
6.3.3 Unique identification 14
6.3.4 Other IoT component characteristics not considered in interoperability 14
6.4 Legacy support 14
6.5 Security 14
6.5.1 Confidentiality 14
6.5.2 Integrity 14
6.5.3 Protection of personally identifiable information 14
6.6 Heterogeneity 14
6.7 Compliance 14
6.8 Other IoT characteristics not considered in interoperability 15
7 Framework for interoperable IoT systems based on IoT reference architecture 15
7.1 Context for interoperability within and between IoT systems 15
7.2 General description 16
7.3 Interoperability of IoT entities 17
Annex A (informative) Overall IoT infrastructure at high-level 18
Bibliography 20

Documents
Document Sharing Hub

Full document details: BS ISO/IEC 21823-1:2019

Figure 1 – Facets of IoT interoperability 10
Figure 2 – Entities and interactions in IoT systems 15
Figure 3 – Concepts for interoperability of IoT entities 16
Figure A.1 – Integration of an IoT system with others 18
Figure A.2 – An overall IoT infrastructure 19

Table 1 – Summary of different facets of IoT interoperability [1] 12

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Full document details: BS ISO/IEC 21823-1:2019

INTERNET OF THINGS (IoT) – INTEROPERABILITY FOR IoT SYSTEMS –

Part 1: Framework

FOREWORD

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The text of this standard is based on the following documents:

FDIS	Report on voting
JTC1-SC41/75/FDIS	JTC1-SC41/87/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

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INTRODUCTION

Internet of Things (IoT) systems involve communications between different entities. This applies to connections between different IoT systems. It also applies to the many connections that exist within IoT systems. The various entities and their connections are described in ISO/IEC 30141.

The ISO/IEC 21823 series addresses issues that relate to interoperability of the communications between IoT systems entities. ISO/IEC 21823-1 describes a general framework for interoperability of IoT systems. This includes a facet model for interoperability which includes five facets of interoperability (i.e. transport, syntactic, semantic, behavioural and policy). This document addresses the framework to achieve interoperability for IoT; the specific facets are addressed in other parts of ISO/IEC 21823.

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INTERNET OF THINGS (IoT) – INTEROPERABILITY FOR IoT SYSTEMS –

Part 1: Framework

1 Scope

This document provides an overview of interoperability as it applies to IoT systems and a framework for interoperability for IoT systems. This document enables IoT systems to be built in such a way that the entities of the IoT system are able to exchange information and mutually use the information in an efficient way. This document enables peer-to-peer interoperability between separate IoT systems.

This document ensures that all parties involved in building and using IoT systems have a common understanding of interoperability as it applies to IoT systems and the various entities within them.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 30141, *Internet of Things (IoT) – Reference architecture*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at http://www.iso.org/obp
- IEC Electropedia: available at http://www.electropedia.org/

3.1
interface
named set of operations that characterize the behaviour of an entity

[SOURCE: ISO 19142:2010, 4.10]

3.2
operation
specification of a transformation or query that an object may be called to execute

[SOURCE: ISO 19142:2010, 4.17]

3.3
framework
structure of processes and specifications designed to support the accomplishment of a specific task

[SOURCE: ISO/IEEE 11073-10201:2004, 3.22]

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