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Part 1: Architecture

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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/IEC JTC 1, *Information technology*, SC 31, *Automatic identification and data capture techniques*.

ISO/IEC 17811 consists of the following parts, under the general title *Information technology — Device control and management*:

— *Part 1: Architecture*

— *Part 2: Specification of Device Control and Management Protocol*

— *Part 3: Specification of Reliable Message Delivery Protocol*

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Introduction

This International Standard provides the architecture for device control and management (DCM). DCM can support the various control and management services, regardless of the network protocols or interfaces. DCM is composed of two protocols: DCMP (Device Control and Management Protocol) and RMDP (Reliable Message Delivery Protocol).

This International Standard consists of the following parts:

— Part 1: Architecture

— Part 2: Specification of Device Control and Management Protocol (DCMP)

— Part 3: Specification of Reliable Message Delivery Protocol (RMDP)

Part 1 of ISO/IEC 17811 describes the architecture of DCM, which includes definition, general concept, requirements, design principles, service scenarios for device management control, and management.

Part 2 of ISO/IEC 17811 specifies the Device Control and Management Protocol (DCMP), which includes the functional entities, protocol operations, message structure, and detailed parameter format associated with DCMP.

Part 3 of ISO/IEC 17811 specifies the Reliable Message Delivery Protocol (RMDP), which includes the interworking with DCMP, protocol operations, and message structure associated with RMDP.

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Information technology — Device control and management —

Part 1: Architecture

1 Scope

This International Standard provides the relationship between DCMP and RMDP with use cases. Also, this International Standard specifies the requirements and design principles.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 17811-2, *Information technology — Device control and management — Part 2: Specification of Device Control and Management Protocol*

ISO/IEC 17811-3, *Information technology — Device control and management — Part 3: Specification of Reliable Message Delivery Protocol*

3 Terms and definitions

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

3.1
device control and management
DCM
operations are purposed to control and manage the various smart devices. For this purpose, DCM is composed of two protocols; DCMP (Device Control and Management Protocol) and RMDP (Reliable Message Delivery Protocol)

3.2
device control and management protocol
DCMP
used to perform various management operations which are categorized into information retrieval, control, diagnostic, and debugging

3.3
reliable message delivery protocol
RMDP
used to provide uniform and reliable message delivery among devices regardless of the underlying network protocols or interfaces

3.4
administrative domain
represents a network area where a single administrator can configure and manage a network with the same policy

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