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Information technology — Distributed application platforms and services (DAPS) — Framework for distributed real-time access systems

Technologies de l'information — Services et plate-formes d'application distribuées — Structure pour les contrôles d'accès diffusés en temps réel

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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.

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 (see www.iso.org/directives).

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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

This document was prepared by Ecma International (as ECMA-412) and drafted in accordance with its editorial rules. It was assigned to Joint Technical Committee ISO/IEC JTC 1, *Information technology*, and adopted under the "fast-track procedure".

This second edition cancels and replaces the first edition (ISO/IEC 20933:2016), which has been technically revised.

The main changes compared to the previous edition are as follows:

— added new functionalities on performance management mechanisms;

— editorial improvements and clarifications to the text of the document.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Introduction

Technology for real-time access control is widely used in many situations such as entrance gates of facilities and service access control systems. Membership and settlement services also benefit from real-time access control systems connected via networks and using database information.

Sophisticated cloud, virtualisation, database, networking technology and services and the evolution of authentication technology such as biometrics, NFC, QR codes used in distributed and modular access control systems enable previously underserved users and operators to innovate around new use cases.

Taking into account the many technologies, this document specifies the reference model and common control functions. It gives direction for ongoing innovation and development of technology and system integration of distributed real-time access control system.

This 2nd edition of the Standard introduces new functionalities on performance management mechanisms. Performance management mechanisms allow an Access system to be evaluated for performance by using specific elements and metrics. This edition also provides a number of editorial improvements and clarifications to the text of the Standard.

NOTE In the 1st edition the title of the Standard was Access systems.

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Information technology — Distributed application platforms and services (DAPS) — Framework for distributed real-time access systems

1 Scope

This document specifies a framework for a distributed real-time Access system. It includes:

1) an ID triggered modular system architecture, the functions of the modules, the semantics of messages those modules exchange, and elements of messages;

2) the system behaviour from the time it receives an access request until the time it sends the result along with the sequence;

3) performance measurement mechanisms using a time stamping function that can be employed for the evaluation of the system.

2 Normative references

There are no normative references in this document.

3 Terms and definitions and acronyms

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

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

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at https://www.iso.org/obp

3.1
Accessor
someone or something that interacts with the Access system

3.2
access-ID
identifier in an Access request

3.3
access-ID-obtained-time
time when an Access-point module obtains an access-ID

3.4
access-point-ID
identifier of an Access-point module

3.5
Access-request
request trigger of processing for access system

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