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OPC Unified Architecture - Part 5: Information Model

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ICS 25.040.40, 35.100

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EN IEC 62541-5

September 2020

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Supersedes EN 62541-5:2015 and all of its amendments and corrigenda (if any)

English Version

OPC Unified Architecture - Part 5: Information Model (IEC 62541-5:2020)

Architecture unifiée OPC - Partie 5: Modèle d'information (IEC 62541-5:2020)

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The text of document 65E/717/FDIS, future edition 3 of IEC 62541-5, prepared by SC 65E "Devices and integration in enterprise systems" of IEC/TC 65 "Industrial-process measurement, control and automation" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62541-5:2020.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2021-05-14
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Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC/TR 62541-1	-	OPC unified architecture - Part 1: Overview and concepts	CLC/TR 62541-1	-
IEC 62541-3	-	OPC Unified Architecture - Part 3: Address Space Model	EN IEC 62541-3	-
IEC 62541-4	-	OPC Unified Architecture - Part 4: Services	EN IEC 62541-4	-
IEC 62541-6	-	OPC Unified Architecture - Part 6: Mappings	EN IEC 62541-6	-
IEC 62541-7	-	OPC unified architecture - Part 7: Profiles	EN IEC 62541-7	-
IEC 62541-9	-	OPC Unified Architecture - Part 9: Alarms and Conditions	EN IEC 62541-9	-
IEC 62541-10	-	OPC Unified Architecture - Part 10: Programs	EN IEC 62541-10	-
IEC 62541-11	-	OPC Unified Architecture - Part 11: Historical Access	EN IEC 62541-11	-
ISO/IEC/IEEE 60559	2011	Information technology - Microprocessor Systems - Floating-Point arithmetic	-	-
IETF RFC 2045	-	Multipurpose Internet Mail Extensions (MIME) Part 1: Format of Internet Message Bodies	-	-
IETF RFC 2046	-	Multipurpose Internet Mail Extensions (MIME) - Part Two: Media Types	-	-

Publication	Year	Title	EN/HD	Year
IETF RFC 2047	-	Multipurpose Internet Mail Extensions - Part Three: Message Header Extensions for Non-ASCII Text	-	-
XML-1	-	XML Schema Part 1: Structures, W3C	-	-
XML-2	-	XML Schema Part 2: Datatypes, W3C	-	-
W3C Xpath	-	XML Path Language (XPath)	-	-
IETF RFC 3629	-	UTF-8, a transformation format of ISO 10646	-	-

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OPC unified architecture – Part 5: Information Model

Architecture unifiée OPC – Partie 5: Modèle d'information

IEC 62541-5:2020-07(en-fr)

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OPC unified architecture – Part 5: Information Model

Architecture unifiée OPC – Partie 5: Modèle d'information

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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OPC UNIFIED ARCHITECTURE –

Part 5: Information Model

FOREWORD

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International Standard IEC 62541-5 has been prepared by subcommittee 65E: Devices and integration in enterprise systems, of IEC technical committee 65: Industrial-process measurement, control and automation.

This third edition cancels and replaces the second edition published in 2015. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) Added Annex F on User Authentication. Describes the Role Information Model that also allows configuration of Roles.
b) Added new data types: "Union", "Decimal", "OptionSet", "DateString", "TimeString", "DurationString", NormalizedString", "DecimalString", and "AudioDataType".
c) Added Method to request a state change in a Server.
d) Added Method to set Subscription to persistent mode.

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e) Added Method to request resending of data from a Subscription.

f) Added concept allowing to temporarily create a file to write to or read from a server in C.4.

g) Added new Variable type to support Selection Lists.

h) Added optional properties to FiniteStateMachineType to expose currently available states and transitions.

i) Added UrisVersion Property to ServerType. This version information can be used for session-less service invocation.

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

FDIS	Report on voting
65E/717/FDIS	65E/733/RVD

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

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

Throughout this document and the other parts of the IEC 62541 series, certain document conventions are used:

Italics are used to denote a defined term or definition that appears in Clause 3 in one of the parts of the series.

Italics are also used to denote the name of a service input or output parameter or the name of a structure or element of a structure that are usually defined in tables.

The *italicized terms and names* are also often written in camel-case (the practice of writing compound words or phrases in which the elements are joined without spaces, with each element's initial letter capitalized within the compound). For example the defined term is *AddressSpace* instead of Address Space. This makes it easier to understand that there is a single definition for *AddressSpace*, not separate definitions for Address and Space.

A list of all parts of the IEC 62541 series, published under the general title *OPC Unified Architecture*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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