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OPC Unified Architecture - Part 13: Aggregates (IEC 62541-13:2020)

OPC Unified Architecture - Teil 13: Aggregation von Daten (IEC 62541-13:2020)

Architecture unifiée OPC - Partie 13: Agrégats (IEC 62541-13:2020)

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| 25.040.40 | Merjenje in krmiljenje industrijskih postopkov | Industrial process measurement and control |
| 35.240.50 | Uporabniške rešitve IT v industriji | IT applications in industry |

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**OPC Unified Architecture - Part 13: Aggregates
(IEC 62541-13:2020)**Architecture unifiée OPC - Partie 13: Agrégats
(IEC 62541-13:2020)OPC Unified Architecture - Teil 13: Aggregation von Daten
(IEC 62541-13:2020)

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN IEC 62541-13:2020 (E)**European foreword**

The text of document 65E/697/FDIS, future edition 2 of IEC 62541-13, 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 62541-13:2020.

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- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2021-04-16
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2023-07-16

This document supersedes EN 62541-13:2015 and all of its amendments and corrigenda (if any).

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Endorsement notice

The text of the International Standard IEC 62541-13:2020 was approved by CENELEC as a European Standard without any modification.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

| <u>Publication</u> | <u>Year</u> | <u>Title</u> | <u>EN/HD</u> | <u>Year</u> |
|--------------------|-------------|--|----------------|-------------|
| 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 | - | - |
| IEC 62541-4 | - | OPC Unified Architecture - Part 4: Services | - | - |
| IEC 62541-5 | - | OPC Unified Architecture - Part 5: Information Model | - | - |
| IEC 62541-8 | - | OPC Unified Architecture - Part 8: Data Access | - | - |
| IEC 62541-11 | - | OPC Unified Architecture - Part 11: Historical Access | - | - |

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INTERNATIONAL STANDARD

NORME INTERNATIONALE



**OPC Unified Architecture –
Part 13: Aggregates**

**ITeh STANDARD PREVIEW
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**Architecture unifiée OPC –
Partie 13: Agrégats**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

OPC UNIFIED ARCHITECTURE –

Part 13: Aggregates

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as “IEC Publication(s)”). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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IEC 62541-13 has been prepared by subcommittee 65E: Devices and integration in enterprise systems, of IEC technical committee 65: Industrial-process measurement, control and automation.

This second edition cancels and replaces the first edition of IEC 62541-13, published in 2015. This edition constitutes a technical revision.

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

- a) no technical changes but numerous clarifications. Also some corrections to the examples.

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

| | |
|--------------|------------------|
| FDIS | Report on voting |
| 65E/697/FDIS | 65E/712/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.

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

Throughout this document and the other Parts of the series, certain document conventions are used:

Italics are used to denote a defined term or definition that appears in the “Terms and definition” clause 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 publication will remain unchanged until the stability date indicated on the IEC web site under “<http://webstore.iec.ch>” in the data related to the specific publication. At this date, the publication will be

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

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OPC UNIFIED ARCHITECTURE –

Part 13: Aggregates

1 Scope

This part of IEC 62541 is part of the overall OPC Unified Architecture specification series and defines the information model associated with Aggregates.

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.

IEC TR 62541-1, *OPC Unified Architecture – Part 1: Overview and Concepts*

IEC 62541-3, *OPC Unified Architecture – Part 3: Address Space Model*

IEC 62541-4, *OPC Unified Architecture – Part 4: Services*

IEC 62541-5, *OPC Unified Architecture – Part 5: Information Model*

IEC 62541-8, *OPC Unified Architecture – Part 8: Data Access*

IEC 62541-11, *OPC Unified Architecture – Part 11: Historical Access*

3 Terms, definitions, and abbreviated terms

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC TR 62541-1, IEC 62541-3, IEC 62541-4, and IEC 62541-11 and the following 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 <http://www.iso.org/obp>

3.1.1

ProcessingInterval

timespan for which derived values are produced based on a specified *Aggregate*

Note 1 to entry: The total time domain specified for *ReadProcessed* is divided by the *ProcessingInterval*. For example, performing a 10-minute *Average* over the time range 12:00 to 12:30 would result in a set of three intervals of *ProcessingInterval* length, with each interval having a start time of 12:00, 12:10 and 12:20 respectively. The rules used to determine the interval *Bounds* are discussed in 5.4.2.2.

3.1.2

interpolated data

data that is calculated from data samples