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Naprave in integracija v proizvodnih sistemih; Integracija procesne naprave - 5. del: FDI informacijski model (IEC 62769-5:2015)

Devices and integration in enterprise systems; Field Device Integration - Part 5: FDI Information Model (IEC 62769-5:2015)

Feldgeräteintegration (FDI) - Teil 5: FDI-Informationsmodell (IEC 62769-5:2015)

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EUROPEAN STANDARD

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July 2015

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**Field Device Integration (FDI) - Part 5: FDI Information Model
(IEC 62769-5:2015)**

Intégration des appareils de terrain (FDI) - Partie 5: Modèle
d'Information FDI
(IEC 62769-5:2015)

Feldgeräteintegration (FDI) - Teil 5: FDI-Informationsmodell
(IEC 62769-5:2015)

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Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

EN 62769-5:2015**European foreword**

The text of document 65E/348/CDV, future edition 1 of IEC 62769-5, 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 62769-5:2015.

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) 2016-03-24
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2018-06-24

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Endorsement notice

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In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC/TR 62541-1

NOTE Harmonized as CLC/TR 62541-1.

IEC 62541-7

NOTE Harmonized as EN 62541-7

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Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 When 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 61784-1	-	Industrial communication networks - Profiles -- Part 1: Fieldbus profiles	EN 61784-1	-
IEC 61804-3	-	Function blocks (FB) for process control and EDDL - Part 3: EDDL specification and communication profiles	-	-
IEC 62541-3	-	OPC unified architecture - Part 3: Address Space Model	EN 62541-3	-
IEC 62541-4	-	OPC Unified Architecture - Part 4: Services	EN 62541-4	-
IEC 62541-5	-	OPC unified architecture - Part 5: Information Model	EN 62541-5	-
IEC 62541-6	-	OPC unified architecture - Part 6: Mappings	EN 62541-6	-
IEC 62541-8	-	OPC Unified Architecture - Part 8: Data Access	EN 62541-8	-
IEC 62541-100	-	OPC unified architecture - Part 100: Device Interface	EN 62541-100	-
IEC 62769-1	-	Field device integration (FDI) - Part 1: Overview	-	-
IEC 62769-2	-	Field Device Integration (FDI) - Part 2: FDI - Client	-	-
IEC 62769-4	-	Field Device Integration (FDI) - Part 4: FDI - Packages	-	-
IEC 62769-7	-	Field Device Integration (FDI) - Part 7: FDI - Communication Devices	-	-

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INTERNATIONAL STANDARD

NORME INTERNATIONALE



Field Device Integration (FDI) –
Part 5: FDI Information Model

Intégration des appareils de terrain (FDI) –
Partie 5: Modèle d'Information FDI

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

FIELD DEVICE INTEGRATION (FDI) –

Part 5: FDI Information Model

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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International Standard IEC 62769-5 has been prepared by subcommittee 65E: Devices and integration in enterprise systems, of IEC technical committee 65: Industrial-process measurement, control and automation.

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

CDV	Report on voting
65E/348/CDV	65E/425/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.

A list of all parts in the IEC 62769 series, published under the general title *Field Device Integration (FDI)*, 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

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- withdrawn,
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INTRODUCTION

The International Electrotechnical Commission (IEC) draws attention to the fact that it is claimed that compliance with this document may involve the use of patents concerning

- a) Method for the Supplying and Installation of Device-Specific Functionalities, see Patent Family DE10357276;
- b) Method and device for accessing a functional module of automation system, see Patent Family EP2182418;
- c) Methods and apparatus to reduce memory requirements for process control system software applications, see Patent Family US2013232186;
- d) Extensible Device Object Model, see Patent Family US12/893,680.

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FIELD DEVICE INTEGRATION (FDI) –

Part 5: FDI Information Model

1 Scope

This part of IEC 62769 defines the FDI Information Model. One of the main tasks of the Information Model is to reflect the topology of the automation system. Therefore it represents the devices of the automation system as well as the connecting communication networks including their properties, relationships, and the operations that can be performed on them. The types in the AddressSpace of the FDI Server constitute some kind of catalogue, which is built from FDI Packages.

The fundamental types for the FDI Information Model are well defined in OPC UA for Devices (IEC 62541-100). The FDI Information Model specifies extensions for a few special cases and otherwise explains how these types are used and how the contents are built from elements of DevicePackages.

The overall FDI architecture is illustrated in Figure 1. The architectural components that are within the scope of this document have been highlighted in this illustration.

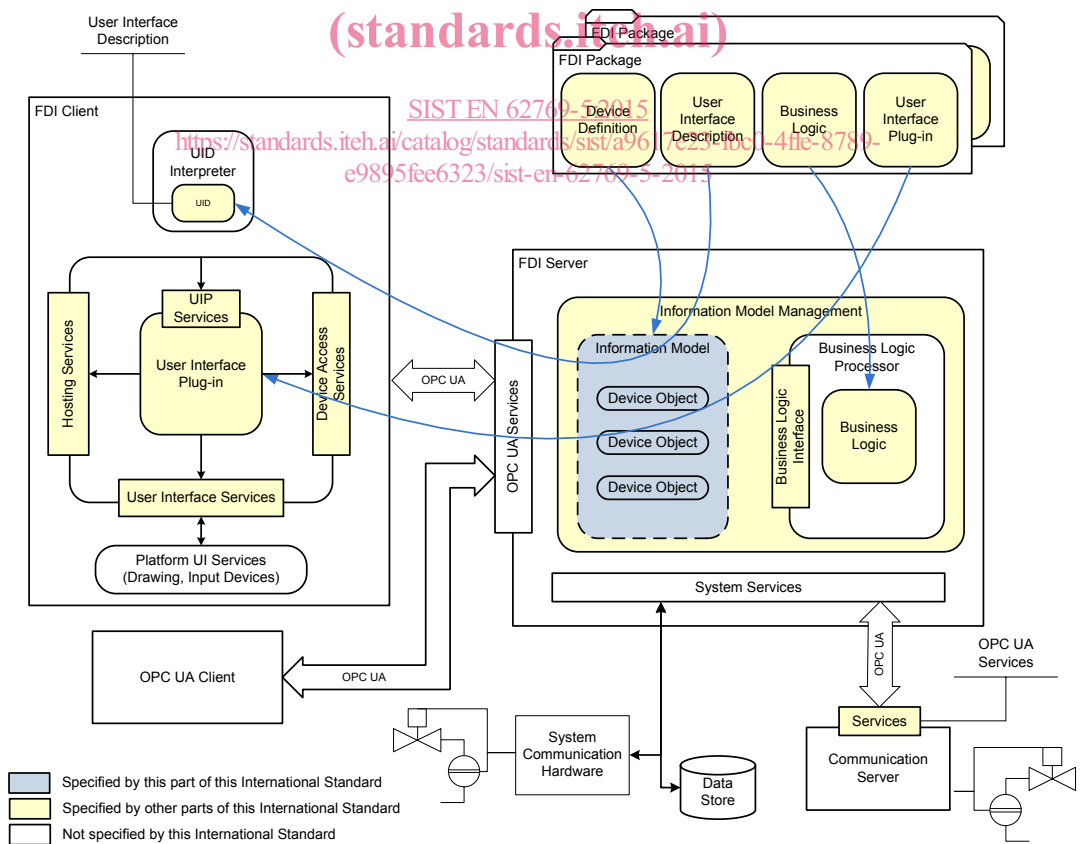


Figure 1 – FDI architecture diagram