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Edition 3.0 2023-04
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colour inside

Field Device Integration (FDI®) – Part 7: Communication Devices

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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FIELD DEVICE INTEGRATION (FDI®) –

Part 7: Communication Devices

FOREWORD

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IEC 62769-7 has been prepared by subcommittee 65E: Devices and integration in enterprise systems, of IEC technical committee 65: Industrial-process measurement, control and automation. It is an International Standard.

This third edition cancels and replaces the second edition published in 2021. This edition constitutes a technical revision.

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

a) added ScanExtended Method.

The text of this International Standard is based on the following documents:

Draft	Report on voting
65E/859/CDV	65E/916/RVC

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

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~~INTRODUCTION~~

~~The IEC 62769 series has the general title *Field Device Integration (FDI)* and the following parts:~~

- ~~Part 1: Overview~~
- ~~Part 2: FDI Client~~
- ~~Part 3: FDI Server~~
- ~~Part 4: FDI Packages~~
- ~~Part 5: FDI Information Model~~
- ~~Part 6: FDI Technology Mapping~~
- ~~Part 7: FDI Communication Devices~~
- ~~Part 100: Profiles – Generic Protocol Extensions~~
- ~~Part 101-1: Profiles – Foundation Fieldbus H1~~
- ~~Part 101-2: Profiles – Foundation Fieldbus HSE~~
- ~~Part 103-1: Profiles – PROFIBUS~~
- ~~Part 103-4: Profiles – PROFINET~~
- ~~Part 109-1: Profiles – HART and WirelessHART~~
- ~~Part 115-2: Profiles – Protocol-specific Definitions for Modbus RTU~~
- ~~Part 150-1: Profiles – ISA 100.11a~~

FIELD DEVICE INTEGRATION (FDI®) –

Part 7: Communication Devices

1 Scope

This part of IEC 62769 specifies the elements implementing communication capabilities called Communication Devices ~~(IEC 62769-5)~~.

The overall FDI®[1] architecture is illustrated in Figure 1. The architectural components that are within the scope of this document have been highlighted in this illustration. The document scope with respect to FDI® Packages is limited to Communication Devices. The Communication Server shown in Figure 1 is an example of a specific Communication Device.

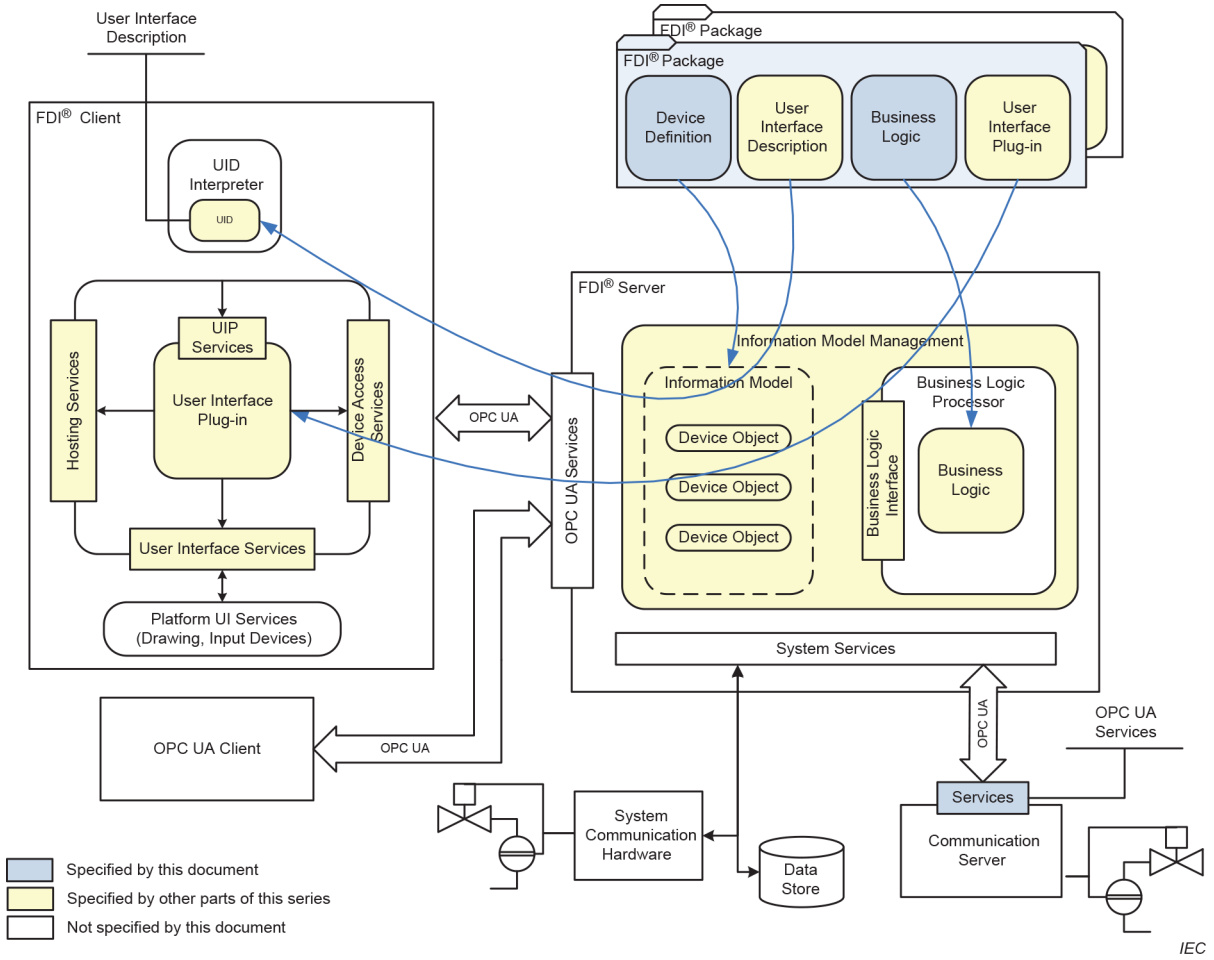

Figure 1 – FDI® architecture diagram

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IEC 61804-4, *Devices and integration in enterprise systems − Function blocks (FB) for process control and electronic device description language (EDDL) − Part 4: EDD interpretation*

~~IEC 62541 (all parts), *OPC Unified Architecture*~~

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

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

IEC 62541-6, *OPC Unified Architecture – Part 6: Mappings*

IEC 62541-7, *OPC unified architecture – Part 7: Profiles*

IEC 62541-100, *OPC Unified Architecture – Part 100: Device Interface*

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IEC 62769-2, *Field Device Integration (FDI®) – Part 2: ~~FDI~~ Client*

IEC 62769-3, *Field Device Integration (FDI®) – Part 3: ~~FDI~~ Server*

IEC 62769-4:~~2020~~2023, *Field Device Integration (FDI®) – Part 4: FDI® Packages*

IEC 62769-5, *Field Device Integration (FDI®) – Part 5: FDI® Information Model*

IEC 62769-7

Edition 3.0 2023-04

INTERNATIONAL STANDARD

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Field Device Integration (FDI®) – Part 7: Communication Devices

Intégration des appareils de terrain (FDI®) – Partie 7: Appareils de Communication

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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Part 7: Communication Devices

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Part 7: Communication Devices

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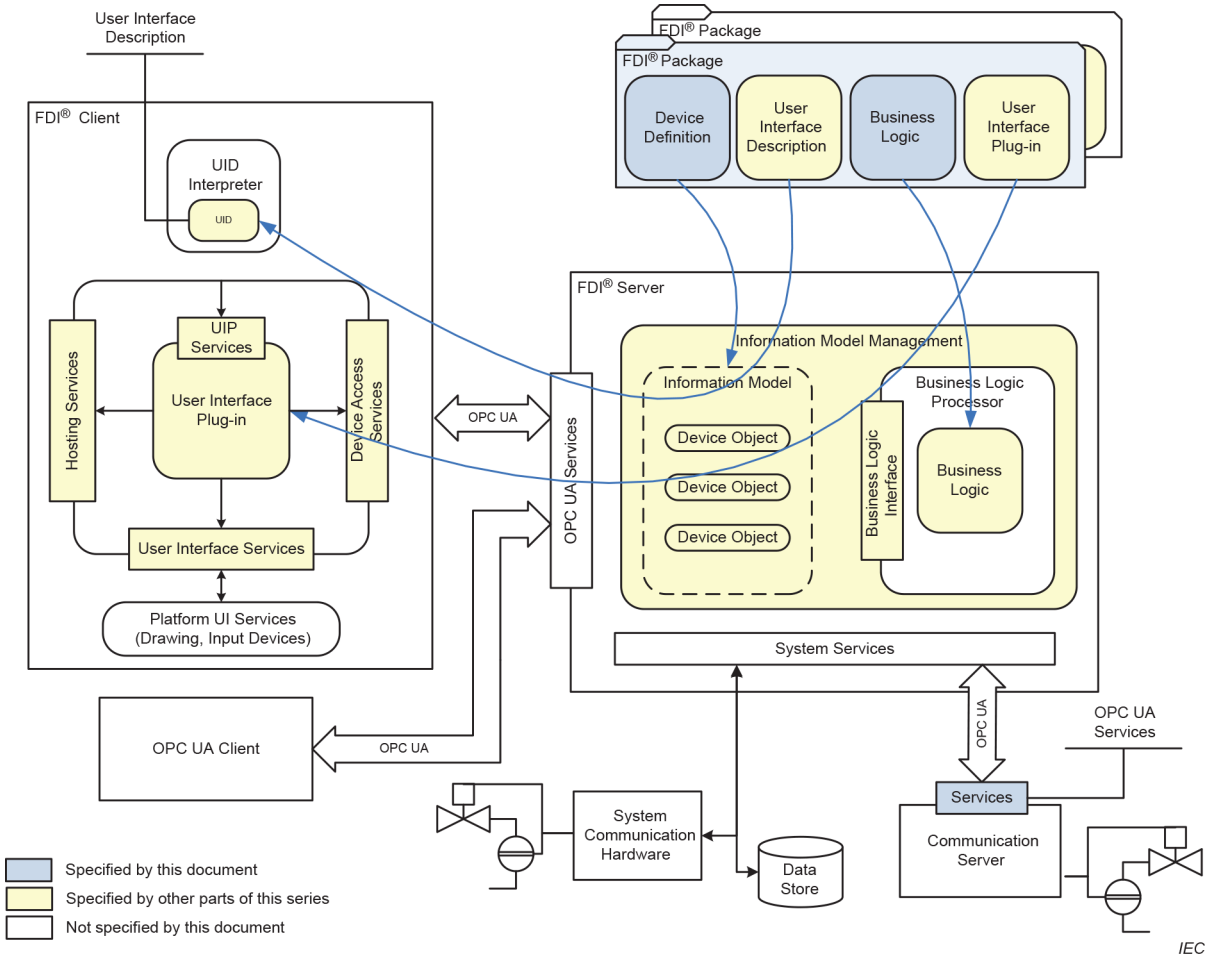

Figure 1 – FDI® architecture diagram

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IEC 62769-4:2023, *Field Device Integration (FDI®) – Part 4: FDI® Packages*

IEC 62769-5, *Field Device Integration (FDI®) – Part 5: FDI® Information Model*

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INTÉGRATION DES APPAREILS DE TERRAIN (FDI®) –

Partie 7: Appareils de Communication

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Cette troisième édition annule et remplace la deuxième édition parue en 2021. Cette édition constitue une révision technique.

Cette édition inclut les modifications techniques majeures suivantes par rapport à l'édition précédente:

a) ajout de la Méthode ScanExtended.

Le texte de cette Norme internationale est issu des documents suivants:

Projet	Rapport de vote
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Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à son approbation.

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INTÉGRATION DES APPAREILS DE TERRAIN (FDI®) –

Partie 7: Appareils de Communication

1 Domaine d'application

La présente partie de l'IEC 62769 spécifie les éléments de mise en œuvre des fonctions de communication, appelés Appareils de Communication.

L'architecture FDI®[1] complète est représentée à la Figure 1. Les composants architecturaux qui relèvent du domaine d'application du présent document ont été mis en évidence dans cette représentation. Le domaine d'application du document relatif aux Paquetages FDI® est limité aux Appareils de Communication. Le Serveur de Communication représenté à la Figure 1 est un exemple d'Appareil de Communication spécifique.

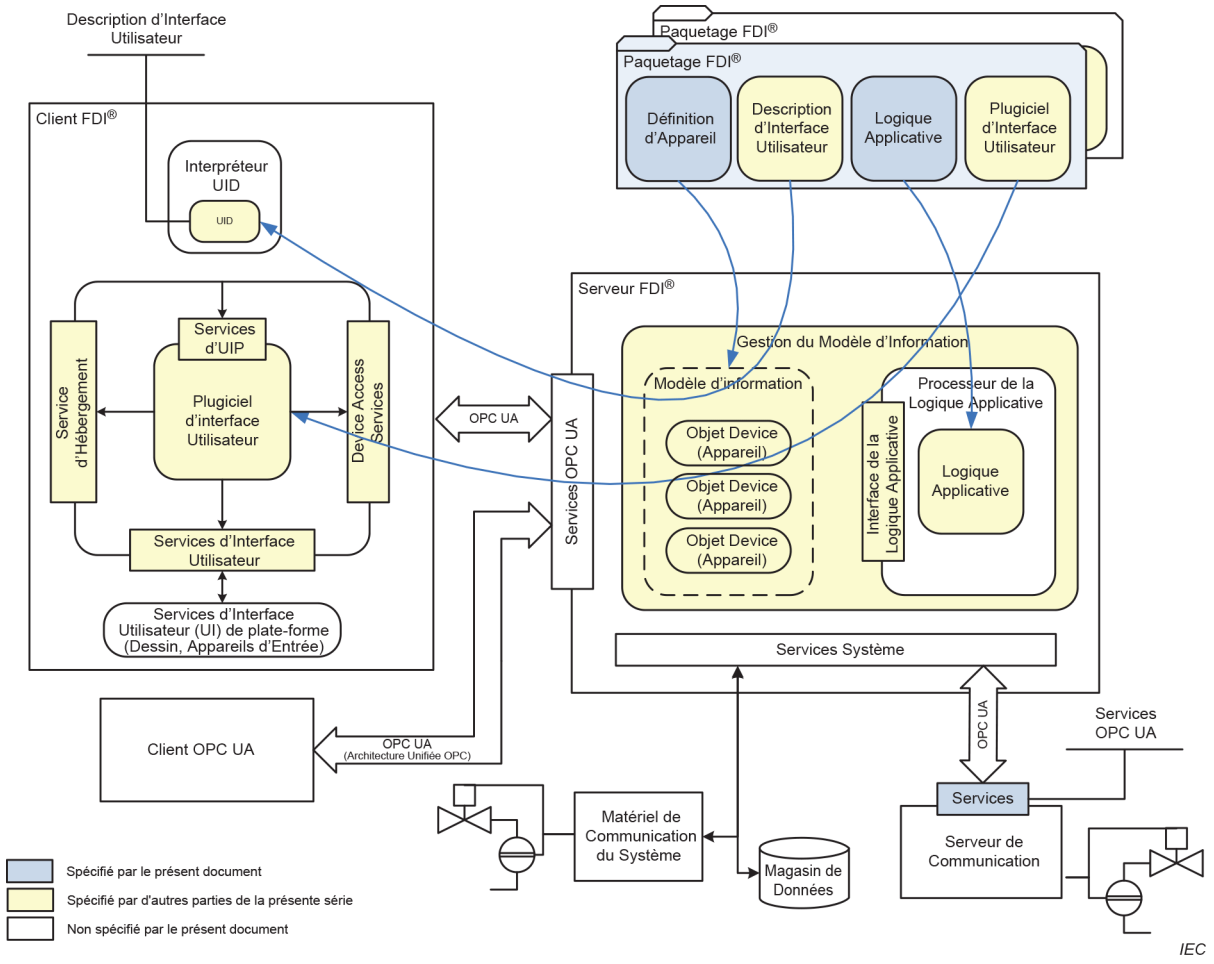

Figure 1 – Diagramme de l'architecture FDI®

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IEC 61804-4, *Les dispositifs et leur intégration dans les systèmes de l'entreprise – Blocs fonctionnels (FB) pour les procédés industriels et le langage de description électronique de produit (EDDL) – Partie 4: Interprétation EDD*

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