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INTERNATIONAL STANDARD

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Field device integration (FDI) – Part 2: FDI Client

INTERNATIONAL
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COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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FIELD DEVICE INTEGRATION (FDI) –

Part 2: FDI Client

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International Standard IEC 62769-2 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 published in 2015. This edition constitutes a technical revision.

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

a) running UIPs in a sandbox.

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

FDIS	Report on voting
65E/759/FDIS	65E/769/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.

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INTRODUCTION

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~~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;~~

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~~Flachsmarktstrasse 8, 32825 Blomberg~~
~~Germany~~

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~~301 S. 1st Avenue, Marshaltown, Iowa 50158~~
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– Part 1: Overview
– Part 2: FDI Client
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– Part 4: FDI Packages
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– Part 7: FDI Communication Devices

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- Part 101-1: Profiles – Foundation Fieldbus H1
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- 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 2: FDI Client

1 Scope

This part of IEC 62769 specifies the FDI Client. 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 figure.

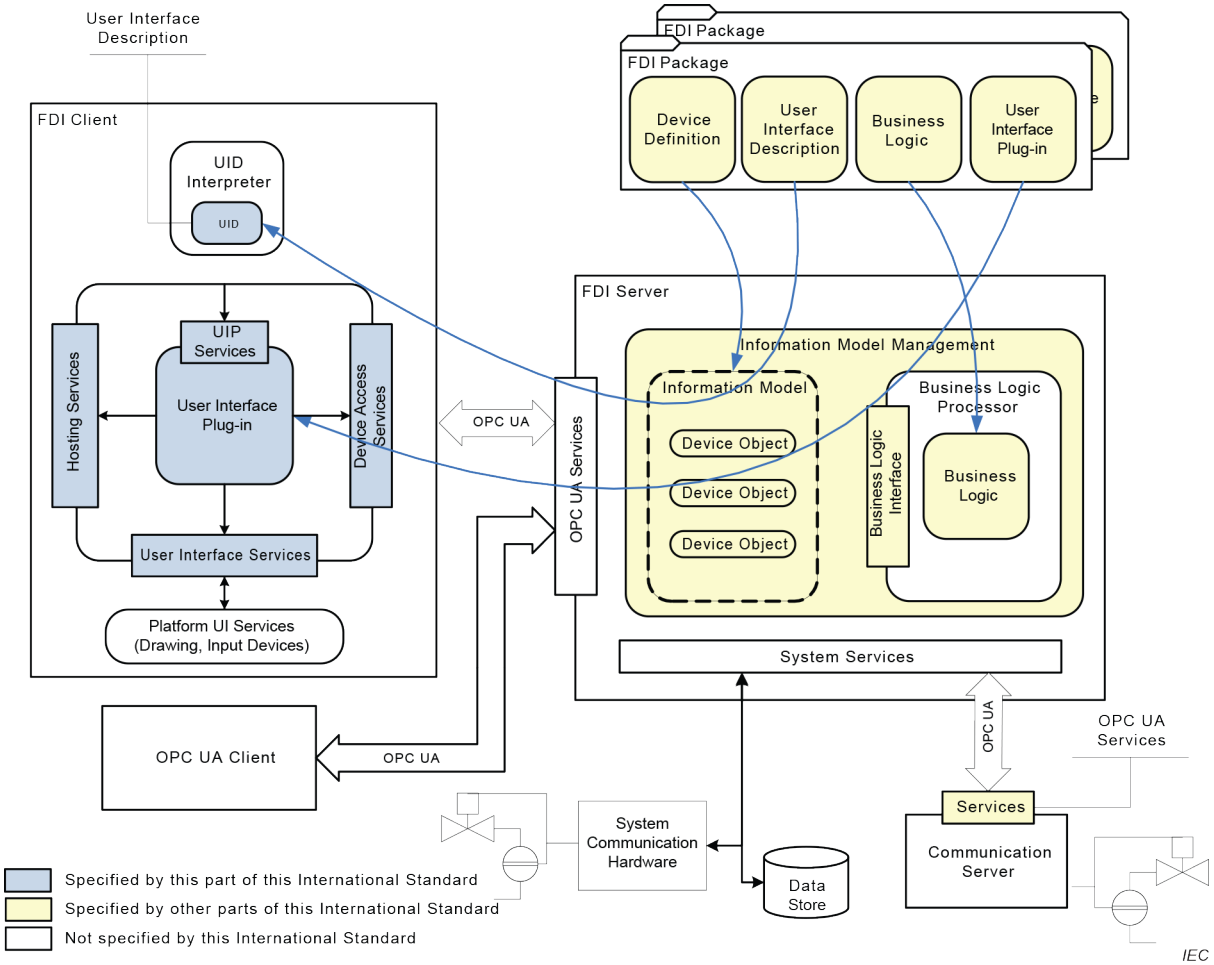

Figure 1 – FDI architecture diagram

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 62443-3-3:2013, *Industrial communication networks – Network and system security – Part 3-3: System security requirements and security levels*

IEC 62769-1, *Field Device Integration (FDI) – Part 1: Overview*

~~NOTE IEC 62769-1 is technically identical to FDI-2021~~

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

~~NOTE IEC 62769-3 is technically identical to FDI-2023.~~

IEC 62769-4~~:2015~~, *Field Device Integration (FDI) – Part 4: FDI Packages*

~~NOTE IEC 62769-4 is technically identical to FDI-2024.~~

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

~~NOTE IEC 62769-5 is technically identical to FDI-2025.~~

IEC 62769-6~~:2015~~, *Field Device Integration (FDI) – Part 6: FDI Technology Mapping*

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

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

ISO/IEC 15948, *Information technology – Computer graphics and image processing – Portable Network Graphics (PNG): Functional specification*

ISO 639, *Codes for the representation of names of languages*

ISO 3166, *Codes for the representation of names of countries and their subdivisions*

~~ISO/IEC 10918-1, *Information technology – Digital compression and coding of continuous-tone still images: Requirements and guidelines*~~

~~IEEE 754, *IEEE Standard for Floating-Point Arithmetic*~~

~~IETF RFC 2083, *PNG (Portable Network Graphics) Specification Version 1.0*~~

IETF RFC 3066, *Tags for the Identification of Languages*

XMLSchema-1, *XML Schema: Structures* (available at http://www.w3.org/TR/xmlschema-1/)

XMLSchema-2, *XML Schema: Datatypes* (available at http://www.w3.org/TR/xmlschema-2/)

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INTERNATIONAL STANDARD

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Field device integration (FDI) – Part 2: FDI Client

Intégration des appareils de terrain (FDI) – Partie 2: Client FDI

IEC 62769-2:2021-02(en-fr)

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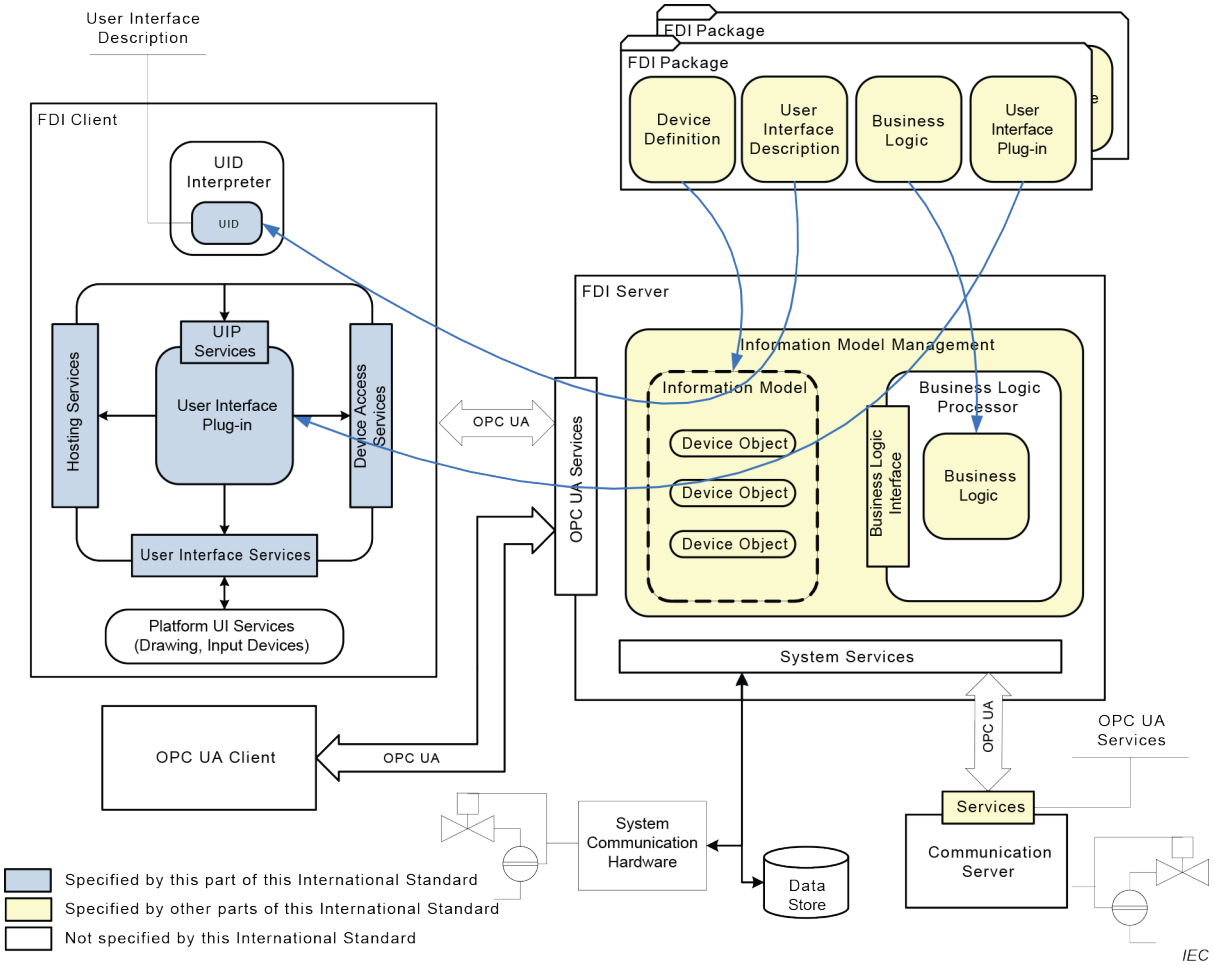

Figure 1 – FDI architecture diagram

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INTÉGRATION DES APPAREILS DE TERRAIN (FDI) –

Partie 2: Client FDI

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Cette deuxième édition annule et remplace la première édition parue en 2015. Cette édition constitue une révision technique.

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

a) UIP en cours d'exécution dans un bac à sable.

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

FDIS	Rapport de vote
65E/759/FDIS	65E/769/RVD

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à l'approbation de cette Norme internationale.

La version française de la norme n’a pas été soumise au vote.

Ce document a été rédigé selon les Directives ISO/IEC, Partie 2.

Une liste de toutes les parties de la série IEC 62769, publiées sous le titre général *Intégration des appareils de terrain (FDI)*, peut être consultée sur le site web de l’IEC.

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– Partie 1: Vue d'ensemble
– Partie 2: Client FDI
– Partie 3: Serveur FDI
– Partie 4: Paquetages FDI
– Partie 5: Modèle d'Information FDI
– Partie 6: Mapping de technologies FDI
– Partie 7: Appareils de communication FDI
– Partie 100: Profils – Extensions de protocoles génériques
– Partie 101-1: Profils – Foundation Fieldbus H1
– Partie 101-2: Profils – Foundation Fieldbus HSE
– Partie 103-1: Profils – PROFIBUS
– Partie 103-4: Profils – PROFINET
– Partie 109-1: Profils – HART et WirelessHART
– Partie 115-2: Profils – Définitions spécifiques au protocole pour Modbus-RTU
– Partie 150-1: Profils – ISA 100.11a

INTÉGRATION DES APPAREILS DE TERRAIN (FDI) –

Partie 2: Client FDI

1 Domaine d'application

La présente partie de l'IEC 62769 définit le client FDI. L'architecture FDI 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 figure.

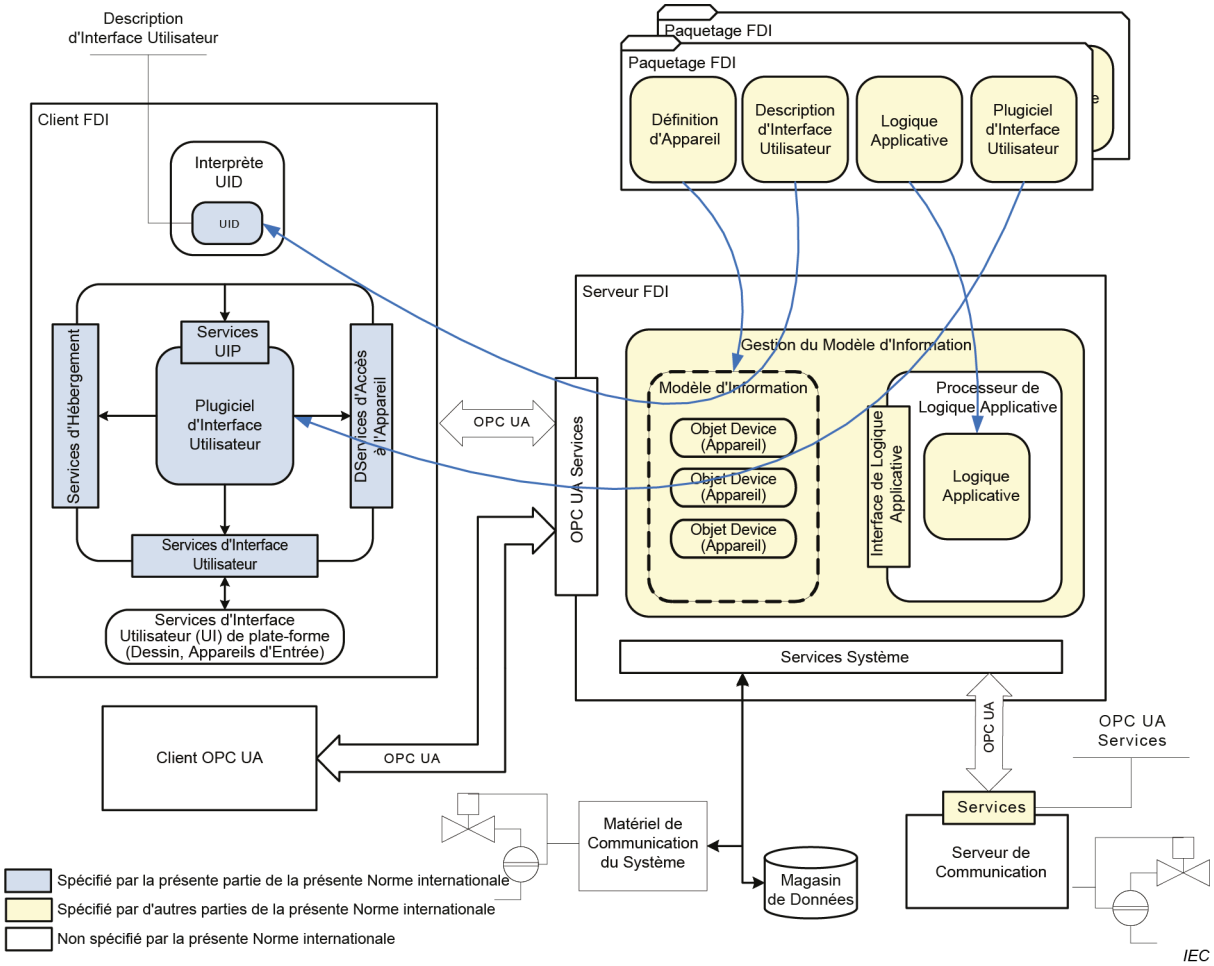

Figure 1 – Diagramme de l'architecture FDI

2 Références normatives

Les documents suivants sont cités dans le texte de sorte qu'ils constituent, pour tout ou partie de leur contenu, des exigences du présent document. Pour les références datées, seule l'édition citée s'applique. Pour les références non datées, la dernière édition du document de référence s'applique (y compris les éventuels amendements).

IEC 62443-3-3:2013, *Réseaux industriels de communication – Sécurité dans les réseaux et les systèmes – Partie 3-3: Exigences de sécurité des systèmes et niveaux de sécurité*

IEC 62769-1, *Intégration des appareils de terrain (FDI) – Partie 1: Vue d'ensemble*

IEC 62769-3, *Intégration des appareils de terrain (FDI) – Partie 3: Serveur FDI*

IEC 62769-4, *Intégration des appareils de terrain (FDI) – Partie 4: Paquetages FDI*

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

IEC 62769-6, *Intégration des appareils de terrain (FDI) – Partie 6: Mapping de technologies FDI*

IEC 62541-3, *Architecture unifiée OPC – Partie 3: Modèle de l'espace d'adressage*

IEC 62541-4, *Architecture unifiée OPC – Partie 4: Services*

ISO/IEC 15948, *Information technology – Computer graphics and image processing – Portable Network Graphics (PNG): Functional specification* (disponible en anglais seulement)

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