



# INTERNATIONAL STANDARD



Field device integration (FDI) –  
Part 6: **FDI** Technology Mapping

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

ICS 25.040.40; 35.100.05

ISBN 978-2-8322-9398-0

**Warning! Make sure that you obtained this publication from an authorized distributor.**

## CONTENTS

FOREWORD.....	4
INTRODUCTION.....	2
1 Scope.....	8
2 Normative references .....	8
3 Terms, definitions, abbreviated terms, <del>acronyms</del> symbols and conventions .....	9
3.1 Terms and definitions.....	9
3.2 Abbreviated terms <del>and acronyms</del> .....	9
3.3 Symbols.....	9
3.4 Conventions.....	10
4 Technical concepts.....	10
4.1 General.....	10
4.1.1 Overview .....	10
4.1.2 Platforms .....	10
4.1.3 FDI Type Library.....	10
4.2 UIP representation.....	12
4.3 UIP executable representation .....	12
4.4 UIP executable compatibility rules .....	12
4.5 Allowed .NET Common Language Run-time versions.....	13
4.5.1 General .....	13
4.5.2 CLR compatibility strategy.....	13
4.5.3 How to identify the .NET target platform of a UIP .....	14
4.6 <del>Installing</del> UIP Deployment.....	14
4.7 UIP Lifecycle.....	15
4.7.1 General .....	15
4.7.2 UIP Assembly activation steps.....	15
4.7.3 UIP Assembly deactivation steps .....	17
4.8 Interaction between an FDI Client and a UIP.....	18
4.8.1 Handling of standard UI elements .....	18
4.8.2 Non-blocking service execution .....	18
4.8.3 Blocking service execution.....	19
4.8.4 Cancel service execution .....	20
4.8.5 Threading .....	21
4.8.6 Timeout .....	21
4.8.7 Exception handling .....	22
4.8.8 Type safe interfaces .....	23
4.8.9 Globalization and localization .....	23
4.8.10 WPF Control handling.....	23
4.8.11 Win Form handling.....	23
4.9 Security .....	23
4.9.1 General .....	23
4.9.2 Access permissions .....	24
4.9.3 Code identity concept .....	24
5 Interface definition.....	26
<del>Bibliography.....</del>	<del>.....</del>

Figure 1 – FDI Type Library structure..... 11

Figure 2 – .NET surrogate process ..... 13

Figure 3 – Identification of Run-time Version..... 14

Figure 4 – IAsyncPattern based asynchronous service execution example..... 19

Figure 5 – Blocking service execution example using IAsyncResult based pattern ..... 20

Figure 6 – Cancel service processing sequence example ..... 20

Figure 7 – Exception source ..... 22

  

Table 1 – Technology edition reference ..... 10

Table 2 – Base Property Services ..... 26

Table 3 – Device Model Services ..... 27

Table 4 – Access Control Services..... 27

Table 5 – Direct Access Services..... 27

Table 6 – Hosting Services ..... 27

Table 7 – UIP Services ..... 29

Table 8 – Base Data Types..... 30

Table 9 – Special Types ..... 30

Withdrawing

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

### FIELD DEVICE INTEGRATION (FDI) –

### Part 6: ~~FDI~~ Technology Mapping

#### 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.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

**This redline version of the official IEC Standard allows the user to identify the changes made to the previous edition IEC 62769-6:2015. A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text.**

International Standard IEC 62769-6 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) redesign of the security concept for UIP execution.

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

FDIS	Report on voting
65E/763/FDIS	65E/773/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.

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 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.

**IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.**

## 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.~~

~~IEC takes no position concerning the evidence, validity and scope of this patent right.~~

~~The holders of these patent rights have assured the IEC that he/she is willing to negotiate licences either free of charge or under reasonable and non-discriminatory terms and conditions with applicants throughout the world. In this respect, the statement of the holder of this patent right is registered with IEC. Information may be obtained from:~~

- ~~a) ABB Research Ltd  
Claes Rytteft  
Affolterstrasse 4  
Zurich, 8050  
Switzerland~~
- ~~b) Phoenix Contact GmbH & Co KG  
Intellectual Property, Licenses & Standards  
Flachmarktstrasse 8, 32825 Blomberg  
Germany~~
- ~~c) Fisher Controls International LLC  
John Dilger, Emerson Process Management LLLP  
301 S. 1<sup>st</sup> Avenue, Marshalltown, Iowa 50158  
USA~~
- ~~d) Rockwell Automation Technologies, Inc.  
1 Allen Bradley Drive  
Mayfield Heights, Ohio 44124  
USA~~

~~Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights other than those identified above. IEC shall not be held responsible for identifying any or all such patent rights.~~

~~ISO ([www.iso.org/patents](http://www.iso.org/patents)) and IEC (<http://patents.iec.ch>) maintain on-line data bases of patents relevant to their standards. Users are encouraged to consult the data bases for the most up to date information concerning patents.~~

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

Withdrawn

## FIELD DEVICE INTEGRATION (FDI) –

### Part 6: ~~FDI~~ Technology Mapping

#### 1 Scope

This part of IEC 62769 specifies the technology mapping for the concepts described in the Field Device Integration (FDI) standard. The technology mapping focuses on implementation regarding the components FDI Client and User Interface Plug-in (UIP) that are specific only to the WORKSTATION platform/.NET as defined in IEC 62769-4:2015, Annex E.

#### 2 Normative references

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.

IEC 61804 (all parts), *Function blocks (FB) for process control and Electronic Device Description Language (EDDL)*

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 62541 (all parts), *OPC Unified Architecture*

~~IEC 61804 (all parts), *Function blocks (FB) for process control*~~

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

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

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

~~NOTE 1 – IEC 62769-2 is technically identical to FDI-2022.~~

~~NOTE 2 – IEC 62769-2 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 1 – IEC 62769-5 is technically identical to FDI-2025.~~

~~NOTE 2 – IEC 62769-5 is technically identical to FDI-2027.~~

ISO/IEC 19505-1, *Information technology – Object Management Group Unified Modeling Language (OMG UML) – Part 1: Infrastructure*



ISO/IEC 29500, (all parts) *Information technology – Document description and processing languages – Office Open XML File Formats*

Withdrawn

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE



**Field device integration (FDI) –  
Part 6: Technology Mapping**

**Intégration des appareils de terrain (FDI) –  
Partie 6: Mapping de technologies**

Withdrawing

## CONTENTS

FOREWORD.....	4
INTRODUCTION.....	6
1 Scope.....	7
2 Normative references .....	7
3 Terms, definitions, abbreviated terms, symbols and conventions .....	7
3.1 Terms and definitions.....	7
3.2 Abbreviated terms.....	8
3.3 Symbols.....	8
3.4 Conventions.....	8
4 Technical concepts.....	8
4.1 General.....	8
4.1.1 Overview .....	8
4.1.2 Platforms.....	9
4.1.3 FDI Type Library.....	9
4.2 UIP representation.....	10
4.3 UIP executable representation .....	11
4.4 UIP executable compatibility rules .....	11
4.5 Allowed .NET Common Language Run-time versions.....	11
4.5.1 General .....	11
4.5.2 CLR compatibility strategy.....	11
4.5.3 How to identify the .NET target platform of a UIP .....	12
4.6 UIP Deployment.....	12
4.7 UIP Lifecycle.....	13
4.7.1 General .....	13
4.7.2 UIP Assembly activation steps.....	13
4.7.3 UIP Assembly deactivation steps .....	15
4.8 Interaction between an FDI Client and a UIP.....	16
4.8.1 Handling of standard UI elements .....	16
4.8.2 Non-blocking service execution .....	16
4.8.3 Blocking service execution.....	17
4.8.4 Cancel service execution .....	18
4.8.5 Threading .....	19
4.8.6 Timeout .....	19
4.8.7 Exception handling .....	20
4.8.8 Type safe interfaces .....	21
4.8.9 Globalization and localization .....	21
4.8.10 WPF Control handling.....	21
4.8.11 Win Form handling.....	21
4.9 Security .....	21
4.9.1 General .....	21
4.9.2 Access permissions .....	22
4.9.3 Code identity concept .....	22
5 Interface definition.....	23
Figure 1 – FDI Type Library structure.....	10

Figure 2 – .NET surrogate process .....	12
Figure 3 – Identification of Run-time Version.....	12
Figure 4 – IAsyncPattern based asynchronous service execution example.....	17
Figure 5 – Blocking service execution example using IAsyncResult based pattern .....	18
Figure 6 – Cancel service processing sequence example .....	18
Figure 7 – Exception source .....	20
Table 1 – Technology edition reference .....	9
Table 2 – Base Property Services .....	23
Table 3 – Device Model Services .....	23
Table 4 – Access Control Services.....	24
Table 5 – Direct Access Services .....	24
Table 6 – Hosting Services .....	24
Table 7 – UIP Services .....	26
Table 8 – Base Data Types.....	26
Table 9 – Special Types .....	27

Withdrawing

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

### FIELD DEVICE INTEGRATION (FDI) –

### Part 6: Technology Mapping

### 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.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 62769-6 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) redesign of the security concept for UIP execution.

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

FDIS	Report on voting
65E/763/FDIS	65E/773/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.

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 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.

**IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.**

## 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

Withhold.com

## FIELD DEVICE INTEGRATION (FDI) –

### Part 6: Technology Mapping

#### 1 Scope

This part of IEC 62769 specifies the technology mapping for the concepts described in the Field Device Integration (FDI) standard. The technology mapping focuses on implementation regarding the components FDI Client and User Interface Plug-in (UIP) that are specific only to the WORKSTATION platform/.NET as defined in IEC 62769-4.

#### 2 Normative references

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.

IEC 61804 (all parts), *Function blocks (FB) for process control and Electronic Device Description Language (EDDL)*

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 62541 (all parts), *OPC Unified Architecture*

ISO/IEC 19505-1, *Information technology – Object Management Group Unified Modeling Language (OMG UML) – Part 1: Infrastructure*

ISO/IEC 29500, (all parts) *Information technology – Document description and processing languages – Office Open XML File Formats*



## SOMMAIRE

AVANT-PROPOS .....	30
INTRODUCTION .....	32
1 Domaine d'application .....	33
2 Références normatives .....	33
3 Termes, définitions, termes abrégés, symboles et conventions .....	33
3.1 Termes et définitions .....	33
3.2 Termes abrégés .....	34
3.3 Symboles .....	34
3.4 Conventions .....	34
4 Concepts techniques .....	34
4.1 Généralités .....	34
4.1.1 Vue d'ensemble .....	34
4.1.2 Plates-formes .....	34
4.1.3 Bibliothèque de Types FDI .....	35
4.2 Représentation de l'UIP .....	36
4.3 Représentation de l'exécutable de l'UIP .....	36
4.4 Règles de compatibilité de l'exécutable de l'UIP .....	37
4.5 Versions permises du CLR (Common Language Run-time) .NET .....	37
4.5.1 Généralités .....	37
4.5.2 Stratégie de compatibilité CLR .....	37
4.5.3 Comment identifier la plate-forme cible .NET d'un UIP .....	38
4.6 Déploiement de l'UIP .....	38
4.7 Cycle de vie de l'UIP .....	39
4.7.1 Généralités .....	39
4.7.2 Étapes d'activation de l'Assemblage UIP .....	39
4.7.3 Étapes de désactivation de l'Assemblage UIP .....	41
4.8 Interaction entre un Client FDI et un UIP .....	42
4.8.1 Traitement des éléments normalisés de l'Interface Utilisateur .....	42
4.8.2 Exécution d'un service sans blocage .....	42
4.8.3 Exécution d'un service de blocage .....	43
4.8.4 Exécution du service Cancel .....	43
4.8.5 Threading (enfilage) .....	44
4.8.6 Expiration de délai .....	45
4.8.7 Traitement des exceptions .....	45
4.8.8 Interfaces de type sûr (type safe) .....	46
4.8.9 Globalisation et localisation .....	46
4.8.10 Traitement de contrôle WPF .....	47
4.8.11 Traitement des formes de Windows .....	47
4.9 Sécurité .....	47
4.9.1 Généralités .....	47
4.9.2 Permissions d'accès .....	47
4.9.3 Concept d'identité de code .....	48
5 Définition d'interface .....	48
Figure 1 – Structure de la Bibliothèque de Types FDI .....	36

Figure 2 – Processus de substitution .NET.....	38
Figure 3 – Identification de la version exécutable.....	38
Figure 4 – Exemple d'exécution d'un service asynchrone fondé sur IAsyncPattern.....	43
Figure 5 – Exemple d'exécution d'un service de blocage avec le modèle fondé sur IAsyncResult.....	43
Figure 6 – Exemple de séquence de traitement du service "Cancel" .....	44
Figure 7 – Source d'exception.....	46
Tableau 1 – Référence de l'édition de technologie .....	35
Tableau 2 – Services de Propriété de Base .....	49
Tableau 3 – Services de Modèle d'Appareil.....	49
Tableau 4 – Services de Contrôle d'Accès .....	49
Tableau 5 – Services d'Accès Direct .....	49
Tableau 6 – Services d'Hébergement.....	50
Tableau 7 – Services d'UIP.....	51
Tableau 8 – Types de données de base.....	52
Tableau 9 – Types particuliers .....	52

Withdrawing

## COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

### INTÉGRATION DES APPAREILS DE TERRAIN (FDI) –

#### Partie 6: Mapping de technologies

#### AVANT-PROPOS

- 1) La Commission Électrotechnique Internationale (IEC) est une organisation mondiale de normalisation composée de l'ensemble des comités électrotechniques nationaux (Comités nationaux de l'IEC). L'IEC a pour objet de favoriser la coopération internationale pour toutes les questions de normalisation dans les domaines de l'électricité et de l'électronique. À cet effet, l'IEC – entre autres activités – publie des Normes internationales, des Spécifications techniques, des Rapports techniques, des Spécifications accessibles au public (PAS) et des Guides (ci-après dénommés "Publication(s) de l'IEC"). Leur élaboration est confiée à des comités d'études, aux travaux desquels tout Comité national intéressé par le sujet traité peut participer. Les organisations internationales, gouvernementales et non gouvernementales, en liaison avec l'IEC, participent également aux travaux. L'IEC collabore étroitement avec l'Organisation Internationale de Normalisation (ISO), selon des conditions fixées par accord entre les deux organisations.
- 2) Les décisions ou accords officiels de l'IEC concernant les questions techniques représentent, dans la mesure du possible, un accord international sur les sujets étudiés, étant donné que les Comités nationaux de l'IEC intéressés sont représentés dans chaque comité d'études.
- 3) Les Publications de l'IEC se présentent sous la forme de recommandations internationales et sont agréées comme telles par les Comités nationaux de l'IEC. Tous les efforts raisonnables sont entrepris afin que l'IEC s'assure de l'exactitude du contenu technique de ses publications; l'IEC ne peut pas être tenue responsable de l'éventuelle mauvaise utilisation ou interprétation qui en est faite par un quelconque utilisateur final.
- 4) Dans le but d'encourager l'uniformité internationale, les Comités nationaux de l'IEC s'engagent, dans toute la mesure possible, à appliquer de façon transparente les Publications de l'IEC dans leurs publications nationales et régionales. Toutes divergences entre toutes Publications de l'IEC et toutes publications nationales ou régionales correspondantes doivent être indiquées en termes clairs dans ces dernières.
- 5) L'IEC elle-même ne fournit aucune attestation de conformité. Des organismes de certification indépendants fournissent des services d'évaluation de conformité et, dans certains secteurs, accèdent aux marques de conformité de l'IEC. L'IEC n'est responsable d'aucun des services effectués par les organismes de certification indépendants.
- 6) Tous les utilisateurs doivent s'assurer qu'ils sont en possession de la dernière édition de cette publication.
- 7) Aucune responsabilité ne doit être imputée à l'IEC, à ses administrateurs, employés, auxiliaires ou mandataires, y compris ses experts particuliers et les membres de ses comités d'études et des Comités nationaux de l'IEC, pour tout préjudice causé en cas de dommages corporels et matériels, ou de tout autre dommage de quelque nature que ce soit, directe ou indirecte, ou pour supporter les coûts (y compris les frais de justice) et les dépenses découlant de la publication ou de l'utilisation de cette Publication de l'IEC ou de toute autre Publication de l'IEC, ou au crédit qui lui est accordé.
- 8) L'attention est attirée sur les références normatives citées dans cette publication. L'utilisation de publications référencées est obligatoire pour une application correcte de la présente publication.
- 9) L'attention est attirée sur le fait que certains des éléments de la présente Publication de l'IEC peuvent faire l'objet de droits de brevet. L'IEC ne saurait être tenue pour responsable de ne pas avoir identifié de tels droits de brevets et de ne pas avoir signalé leur existence.

La Norme internationale IEC 62769-6 a été établie par le sous-comité 65E: Les dispositifs et leur intégration dans les systèmes de l'entreprise, du comité d'études 65 de l'IEC: Mesure, commande et automation dans les processus industriels.

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) redéfinition du concept de sécurité pour l'exécution de l'UIP.

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

FDIS	Rapport de vote
65E/763/FDIS	65E/773/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.

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.

Le comité a décidé que le contenu de ce document ne sera pas modifié avant la date de stabilité indiquée sur le site web de l'IEC sous "<http://webstore.iec.ch>" dans les données relatives au document recherché. À cette date, le document sera

- reconduit,
- supprimé,
- remplacé par une édition révisée, ou
- amendé.

**IMPORTANT – Le logo 'colour inside' qui se trouve sur la page de couverture de cette publication indique qu'elle contient des couleurs qui sont considérées comme utiles à une bonne compréhension de son contenu. Les utilisateurs devraient, par conséquent, imprimer cette publication en utilisant une imprimante couleur.**

## INTRODUCTION

La série IEC 62769 est publiée sous le titre général "*Intégration des appareils de terrain (FDI)*" et comporte les parties suivantes:

- 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 6: Mapping de technologies

#### 1 Domaine d'application

La présente partie de l'IEC 62769 spécifie le mapping de technologies pour les concepts décrits dans la norme d'intégration des appareils de terrain (FDI). Le mapping de technologies porte essentiellement sur la mise en œuvre relative aux composants: Client FDI et Plugiciel d'Interface Utilisateur (UIP) qui ne sont spécifiques qu'à la plate-forme WORKSTATION (Poste de travail)/.NET telle que définie dans l'IEC 62769-4.

#### 2 Références normatives

Les documents ci-après, dans leur intégralité ou non, sont des références normatives indispensables à l'application 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 61804 (toutes les parties), *Blocs fonctionnels (FB) pour les procédés industriels et le Langage de Description Electronique de Produit (EDDL)*

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

IEC 62769-2, *Intégration des appareils de terrain (FDI) – Partie 2: Client FDI*

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

IEC 62541 (toutes les parties), *Architecture unifiée OPC*

ISO/IEC 19505-1, *Information technology – Object Management Group Unified Modeling Language (OMG UML) – Part 1: Infrastructure* (disponible en anglais seulement)

ISO/IEC 29500 (toutes les parties), *Information technology – Document description and processing languages – Office Open XML File Formats* (disponible en anglais seulement)