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# INTERNATIONAL STANDARD



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

INTERNATIONAL  
ELECTROTECHNICAL  
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### FIELD DEVICE INTEGRATION (FDI®) –

#### Part 2: Client

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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. 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 interactive transfer to device;
- b) corrected ListOfInputArguments.

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

Draft	Report on voting
65E/855/CDV	65E/912/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](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/standardsdev/publications](http://www.iec.ch/standardsdev/publications).

A list of all parts in the IEC 62769 series, published under the general title *Field device integration (FDI<sup>®</sup>)*, 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

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- withdrawn,
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## INTRODUCTION

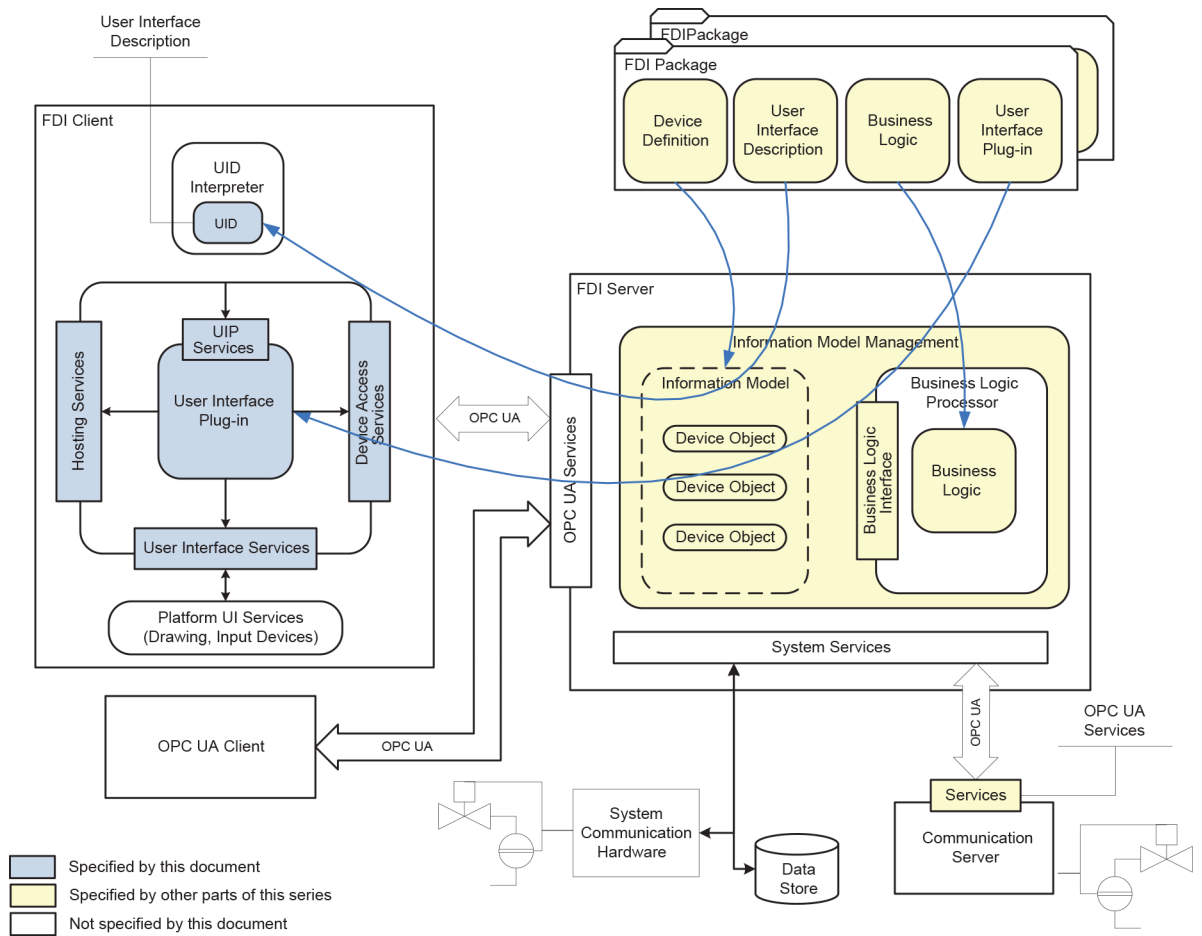
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- Part 1: Overview
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- Part 5: FDI Information Model
- Part 6: FDI Technology Mapping
- Part 7: FDI Communication Devices
- Part 100: Profiles — Generic Protocol Extensions
- Part 101-1: Profiles — 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 2: Client

## 1 Scope

This part of IEC 62769 specifies the FDI<sup>®1</sup> Client. See Annex C for some typical FDI<sup>®</sup> Client use cases. The overall FDI<sup>®</sup> architecture is illustrated in Figure 1. The architectural components that are within the scope of this document have been highlighted in this figure.



IEC

Figure 1 – FDI<sup>®</sup> 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.

<sup>1</sup> FDI<sup>®</sup> is a registered trademark of the non-profit organization Fieldbus Foundation, Inc. This information is given for the convenience of users of this document and does not constitute an endorsement by IEC of the trademark holder or any of its products. Compliance does not require use of the trade name. Use of the trade name requires permission of the trade name holder.

For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 61804-3, *Devices and integration in enterprise systems – Function blocks (FB) for process control and electronic device description language (EDDL) – Part 3: EDDL syntax and semantics*

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

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

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

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

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

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

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

IEC 62769-6 (all parts), *Field Device Integration (FDI®) – Part 6: FDI® Technology Mappings*

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

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~~ *Language codes*

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

IEEE Std 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/>)~~

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE



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

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

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## FIELD DEVICE INTEGRATION (FDI®) –

### Part 2: Client

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

- a) added interactive transfer to device;
- b) corrected ListOfInputArguments.



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

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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](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/standardsdev/publications](http://www.iec.ch/standardsdev/publications).

A list of all parts in the IEC 62769 series, published under the general title *Field device integration (FDI<sup>®</sup>)*, 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

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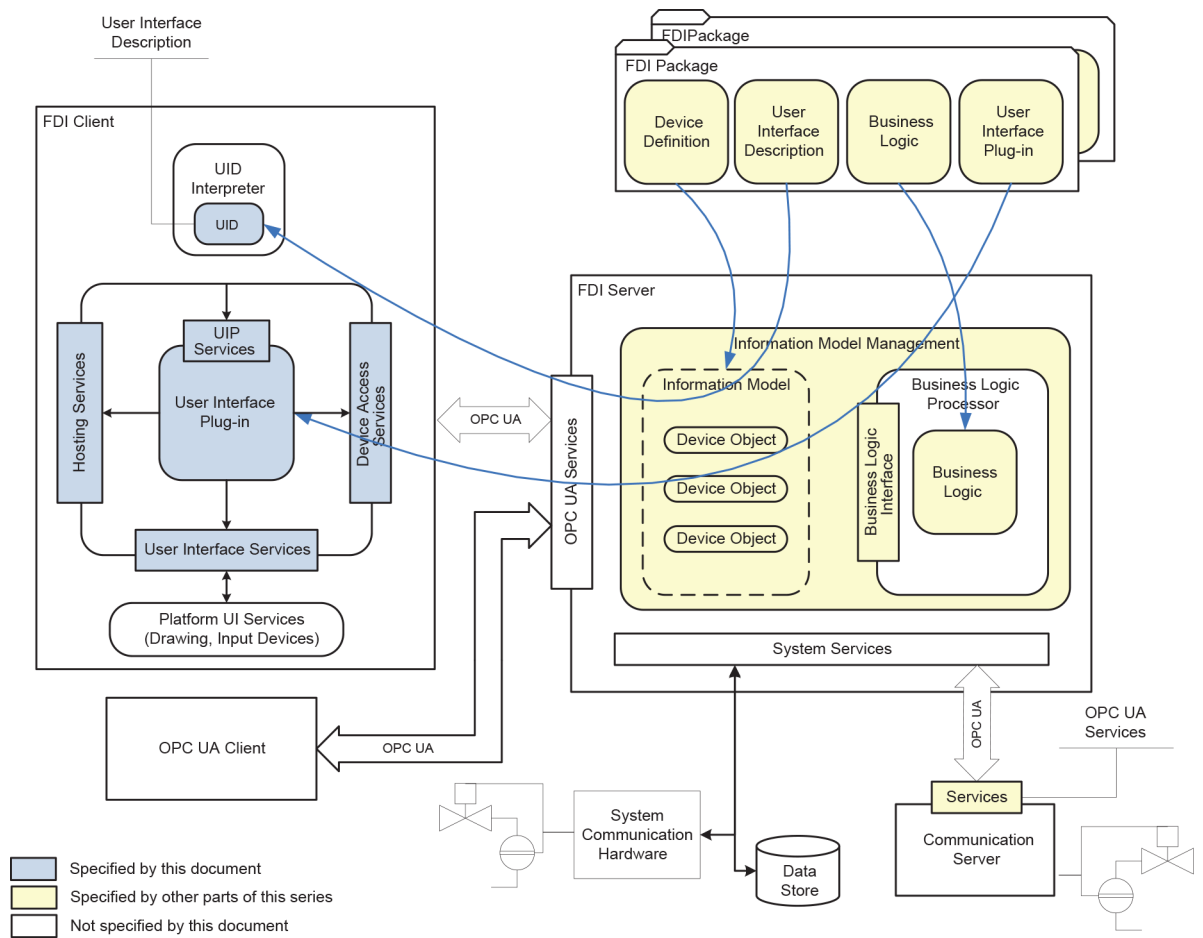
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# FIELD DEVICE INTEGRATION (FDI®) –

## Part 2: Client

### 1 Scope

This part of IEC 62769 specifies the FDI<sup>®1</sup> Client. See Annex C for some typical FDI<sup>®</sup> Client use cases. The overall FDI<sup>®</sup> architecture is illustrated in Figure 1. The architectural components that are within the scope of this document have been highlighted in this figure.



IEC

Figure 1 – FDI<sup>®</sup> 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.

<sup>1</sup> FDI<sup>®</sup> is a registered trademark of the non-profit organization Fieldbus Foundation, Inc. This information is given for the convenience of users of this document and does not constitute an endorsement by IEC of the trademark holder or any of its products. Compliance does not require use of the trade name. Use of the trade name requires permission of the trade name holder.

For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 61804-3, *Devices and integration in enterprise systems – Function blocks (FB) for process control and electronic device description language (EDDL) – Part 3: EDDL syntax and semantics*

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

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

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

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

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

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

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

IEC 62769-6 (all parts), *Field Device Integration (FDI®) – Part 6: FDI® Technology Mappings*

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

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

ISO 639, *Language codes*

ISO 3166, *Country codes*

IEEE Std 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*

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

#### Partie 2: Client

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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 du transfert interactif vers l'appareil;
- b) correction de ListOfInputArguments.

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

Projet	Rapport de vote
65E/855/CDV	65E/912/RVC

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

La langue employée pour l'élaboration de cette Norme internationale est l'anglais.

Ce document a été rédigé selon les Directives ISO/IEC, Partie 2, il a été développé selon les Directives ISO/IEC, Partie 1 et les Directives ISO/IEC, Supplément IEC, disponibles sous [www.iec.ch/members\\_experts/refdocs](http://www.iec.ch/members_experts/refdocs). Les principaux types de documents développés par l'IEC sont décrits plus en détail sous [www.iec.ch/standardsdev/publications](http://www.iec.ch/standardsdev/publications).

Une liste de toutes les parties de la série IEC 62769, publiées sous le titre général *Intégration des appareils de terrain (FDI®)*, se trouve sur le site web de l'IEC.

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# INTÉGRATION DES APPAREILS DE TERRAIN (FDI®) –

## Partie 2: Client

### 1 Domaine d'application

La présente partie de l'IEC 62769 spécifie le Client FDI®<sup>1</sup>. Voir l'Annexe C pour certains cas d'utilisation types du 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.

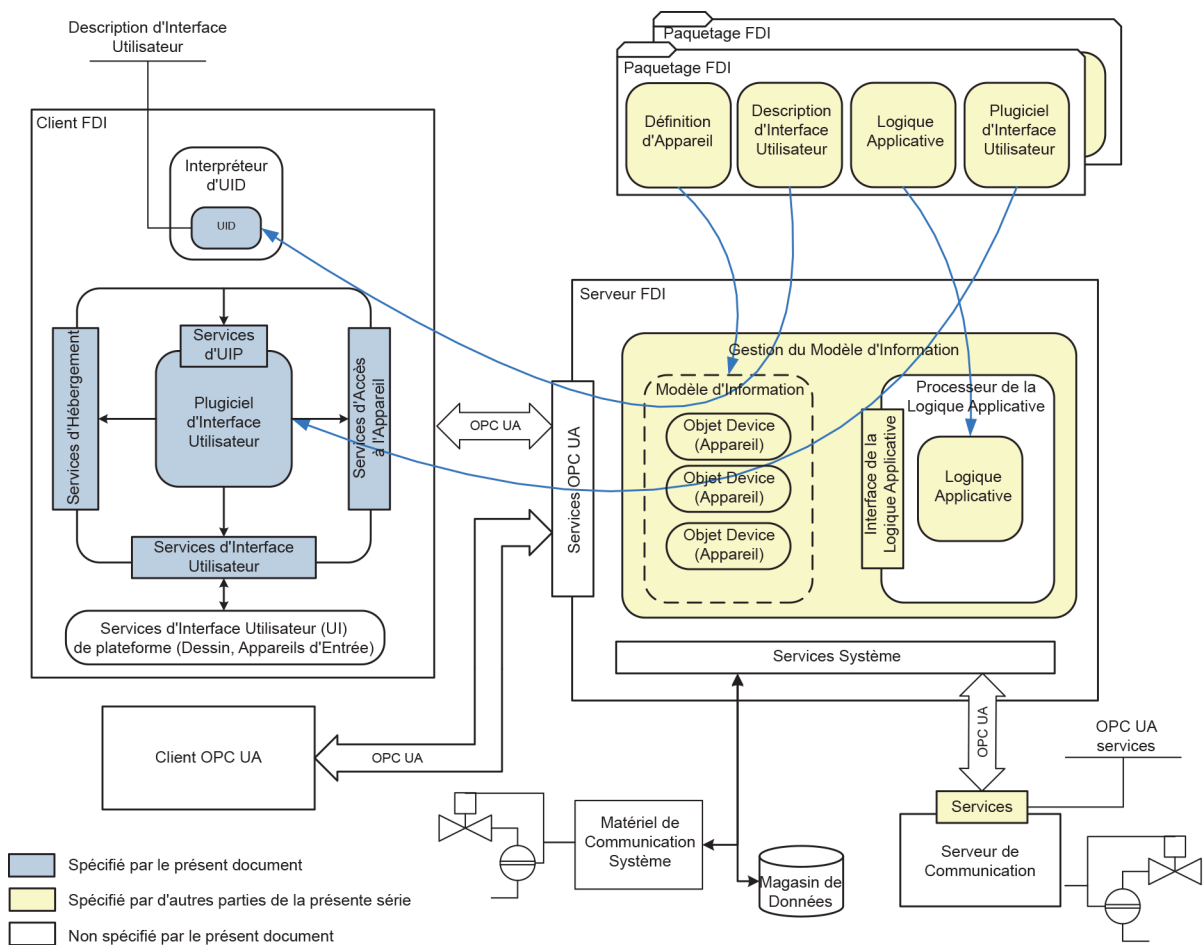


Figure 1 – Diagramme de l'architecture FDI®

<sup>1</sup> FDI® est une marque déposée de l'organisation à but non lucratif Fieldbus Foundation, Inc. Cette information est donnée à l'intention des utilisateurs du présent document et ne signifie nullement que l'IEC approuve le détenteur de la marque ou l'emploi de ses produits. La conformité n'exige pas l'utilisation de la marque. L'utilisation de la marque exige l'autorisation du détenteur de la marque.

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IEC 61804-3, *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 3: Sémantique et syntaxe EDDL*

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*

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

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

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

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*

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 (toutes les parties), *Intégration des appareils de terrain (FDI®) – Partie 6: Mappings de technologies FDI®*

ISO/IEC 10918-1, *Technologies de l'information – Compression numérique et codage des images fixes de nature photographique: Prescriptions et lignes directrices*

ISO/IEC 15948, *Technologies de l'information – Infographie et traitement d'images – Graphiques de réseau portables (PNG): Spécification fonctionnelle*

ISO 639, *Codes des langues*

ISO 3166, *Codes des noms de pays*

IEEE Std 754, *IEEE Standard for Floating-Point Arithmetic* (disponible en anglais seulement)

IETF RFC 2083, *PNG (Portable Network Graphics) Specification Version 1.0* (disponible en anglais seulement)

IETF RFC 3066, *Tags for the Identification of Languages* (disponible en anglais seulement)