ICS 25.040.40, 35.100.05, 35.110

SLOVENSKÁ TECHNICKÁ NORMA

August 2017

STN	**Špecifikácia rozhrania softvérových nástrojov na prácu s prevádzkovými prístrojmi (FDT) Časť 2: Koncept a podrobný opis**	**STN EN 62453-2** 18 4012

Field Device Tool (FDT) Interface Specification - Part 2: Concepts and detailed Description

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 07/17

Obsahuje: EN 62453-2:2017, IEC 62453-2:2016

Oznámením tejto normy sa od 20.01.2020 ruší
STN EN 62453-2 (18 4012) z mája 2010

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 62453-2

March 2017

ICS 25.040.40; 35.100.05; 35.110

Supersedes EN 62453-2:2009

English Version

Field Device Tool (FDT) Interface Specification - Part 2: Concepts and detailed Description (IEC 62453-2:2016)

Spécification des interfaces des outils des dispositifs de terrain (FDT) - Partie 2: Concepts et description détaillée (IEC 62453-2:2016)

Field Device Tool (FDT)-Schnittstellenspezifikation - Teil 2: Konzept und grundlegende Beschreibung (IEC 62453-2:2016)

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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

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European foreword

The text of document 65E/334/CDV, future edition 2 of IEC 62453-2, 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 62453-2:2017.

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)	2017-10-20
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2020-01-20

This document supersedes EN 62453-2:2009.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

The text of the International Standard IEC 62453-2:2016 was approved by CENELEC as a European Standard without any modification.

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

IEC/TR 62453-41	NOTE	Harmonized as CLC/TR 62453-41

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.

Publication	Year	Title	EN/HD	Year
IEC 61131	series	Programmable controllers	EN 61131	series
IEC 62453-1	2016	Field Device Tool (FDT) interface specification -- Part 1: Overwiew and guidance	FprEN 62453-1	2013
IEC 62453-3xy	series	Field device tool (FDT) interface specification	EN 62453-3xy	series
IEC/TR 62390	2005	Common automation device - Profile guideline	-	-

IEC 62453-2

Edition 2.0 2016-12

INTERNATIONAL STANDARD

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Field device tool (FDT) interface specification – Part 2: Concepts and detailed description

Spécification des interfaces des outils des dispositifs de terrain (FDT) – Partie 2: Concepts et description détaillée

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INTERNATIONAL STANDARD

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Field device tool (FDT) interface specification – Part 2: Concepts and detailed description

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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FIELD DEVICE TOOL (FDT) INTERFACE SPECIFICATION –

Part 2: Concepts and detailed description

FOREWORD

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International Standard IEC 62453-2 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 2009. This edition constitutes a technical revision.

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

- Clarification for categories of DTMs (e.g. new category ‘Composite Device DTM’)
- Clarification: Command functions
- New concept: Static function
- Clarification for Communication Channel and communication
- Clarifications for identification

- Clarifications for scanning and DTM assignment
- New concept: PLC tool support

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

CDV	Report on voting
65E/334/CDV	65E/334/RVC

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 of the IEC 62453 series, under the general title *Field Device Tool (FDT) interface specification,* 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

- 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 wich are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION

This part of IEC 62453 is an interface specification for developers of FDT (Field Device Tool) components for function control and data access within a client/server architecture. The specification is a result of an analysis and design process to develop standard interfaces to facilitate the development of servers and clients by multiple vendors that need to interoperate seamlessly.

With the integration of fieldbuses into control systems, there are a few other tasks which need to be performed. In addition to fieldbus- and device-specific tools, there is a need to integrate these tools into higher-level system-wide planning or engineering tools. In particular, for use in extensive and heterogeneous control systems, typically in the area of the process industry, the unambiguous definition of engineering interfaces that are easy to use for all those involved is of great importance.

A device-specific software component created according to this standard is called Device Type Manager (DTM). It integrates all device-specific data, functions and business rules into the system via the FDT services defined herein.

The FDT/DTM approach is open for all kind of fieldbuses and enables integration variety of devices into heterogeneous systems.

Figure 1 shows how this part of IEC 62453 is aligned in the structure of the IEC 62453 series.

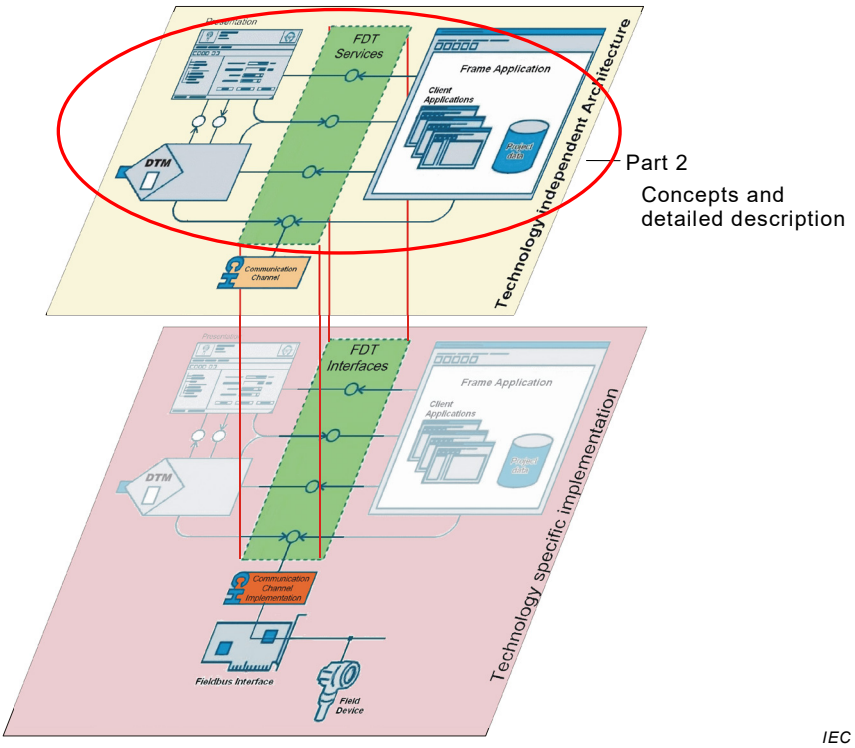

Figure 1 – Part 2 of the IEC 62453 series

FIELD DEVICE TOOL (FDT) INTERFACE SPECIFICATION –

Part 2: Concepts and detailed description

1 Scope

This part of IEC 62453 explains the common principles of the field device tool concept. These principles can be used in various industrial applications such as engineering systems, configuration programs and monitoring and diagnostic applications.

This standard specifies the general objects, general object behavior and general object interactions that provide the base of FDT.

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 61131 (all parts), *Programmable controllers*

IEC/TR 62390:2005, *Common automation device – Profile guideline*

IEC 62453-1:2016, *Field Device Tool (FDT) interface specification – Part 1: Overview and guidance*

IEC 62453-3xy (all parts), *Field Device Tool (FDT) interface specification – Part 3xy: Communication profile integration*