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S.R CLC/TR 62453-61:2009

Field device tool interface (FDT) specification -- Part 61: Device type manager (DTM) - Styleguide for common object model (IEC/TR 62453 -61:2009 (EQV))

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TECHNICAL REPORT

RAPPORT TECHNIQUE

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CLC/TR 62453-61

November 2009

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English version

Field device tool interface (FDT) specification - Part 61: Device type manager (DTM) - Styleguide for common object model

(IEC/TR 62453-61:2009)

Spécification des interfaces des outils des dispositifs de terrain (FDT) - Partie 61: Gestionnaire type de dispositifs (DMT) - Guide stylistique pour le modèle objet commun (CEI/TR 62453-61:2009)

Field Device Tool (FDT)-Schnittstellenspezifikation - Teil 61: Device Type Manager (DTM) - Leitfaden zur Gestaltung von Bedienoberflächen (IEC/TR 62453-61:2009)

This Technical Report was approved by CENELEC on 2009-10-01.

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CENELEC

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

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Foreword

The text of document 65E/72/CDV, future edition 1 of IEC/TR 62453-61, 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 was approved by CENELEC as CLC/TR 62453-61 on 2009-10-01.

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the Technical Report IEC/TR 62453-61:2009 was approved by CENELEC as a Technical Report without any modification.

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Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application 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.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC 62453-1	2009	Field device tool (FDT) interface specification - Part 1: Overview and guidance	EN 62453-1	2009
IEC 62453-2	2009	Field device tool (FDT) interface specification - Part 2: Concepts and detailed description	EN 62453-2	2009
IEC/TR 62453-41	2009	Field device tool (FDT) interface specification - Part 41: Object model integration profile - Common object model	CLC/TR 62453-41	2009
ISO/IEC 19501	2005	Information technology - Open Distributed Processing - Unified Modeling Language (UML)	-	-

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

FIELD DEVICE TOOL (FDT) INTERFACE SPECIFICATION –

Part 61: Device Type Manager (DTM) Styleguide for common object model

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.
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IEC/TR 62453-61, which is a technical report, has been prepared by subcommittee 65E: Devices and integration in enterprise systems, of IEC technical committee 65: Industrial-process measurement, control and automation:

This part, in conjunction with the other parts of the first edition of the IEC 62453 series cancels and replaces IEC/PAS 62453-1, IEC/PAS 62453-2, IEC/PAS 62453-3, IEC/PAS 62453-4 and IEC/PAS 62453-5 published in 2006, and constitutes a technical revision.

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The text of this technical report is based on the following documents:

Enquiry draft	Report on voting
65E/72/DTR	65E/121/RVC

Full information on the voting for the approval of this technical report 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.

The 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 maintenance result 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.

A bilingual version of this publication may be issued at a later date.

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INTRODUCTION

This technical report is a user interface design specification for developers of FDT (Field Device Tool) components for Function Control and Data Access within a Client/Server architecture. The technical report is a result of an analysis and design process to develop standard interfaces to facilitate the development of components by multiple vendors that shall interoperate seamlessly.

A device-specific software component, called DTM (Device Type Manager), is supplied by the field device manufacturer with its device. The DTM is integrated into engineering tools via the FDT interfaces defined in this specification. The approach to integration is in general open for all kinds of fieldbusses and thus meets the requirements for integrating different kinds of devices into heterogeneous control systems.

To ensure the consistent management of a plant-wide control and automation technology, it is necessary to fully integrate fieldbusses, devices and sub-systems as a seamless part of a wide range of automation tasks covering the whole automation life-cycle. This integration also requires a consistent look and feel of device specific components.

Figure 1 shows how IEC/TR 62453-61 is aligned in the structure of the IEC 62453 series.

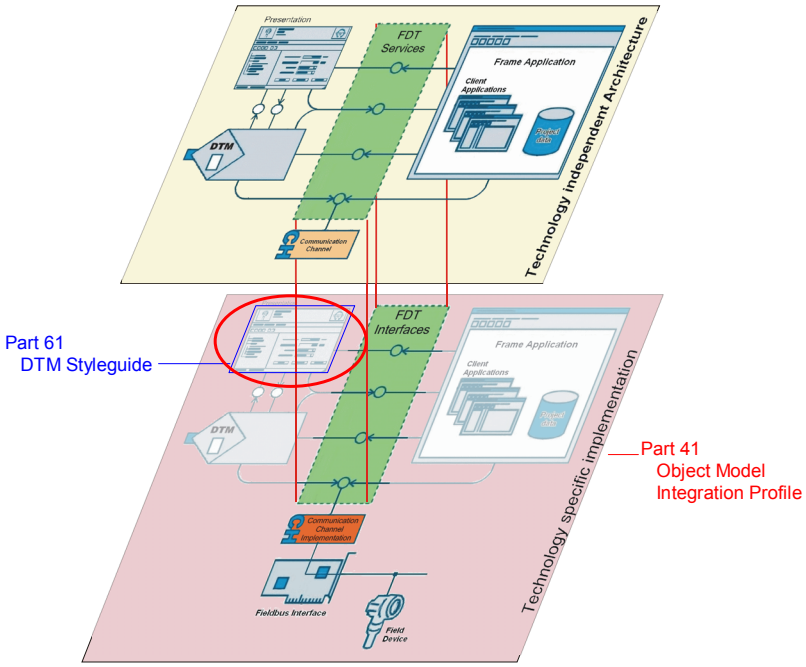

Figure 1 – Part 61 of the IEC 62453 series

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FIELD DEVICE TOOL (FDT) INTERFACE SPECIFICATION –

Part 61: Device Type Manager (DTM) Styleguide for common object model

1 Scope

IEC/TR 62453-61, which is a technical report, explains the guidelines and rules for the implementation of a Device Type Manager (DTM) with regard to the user interface and its functions. These guidelines and rules are part of the FDT specification and are intended to ensure that all users are provided with clear and consistent user interface functions and features across DTM devices in a system.

2 Normative references

The following referenced documents are indispensable for the application 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 62453-1:2009, *Field Device Tool (FDT) interface specification – Part 1: Overview and guidance*

IEC 62453-2:2009, *Field Device Tool (FDT) interface specification – Part 2: Concepts and detailed description*

IEC/TR 62453-41:2009, *Field Device Tool (FDT) interface specification – Part 41: Object model integration profile – Common object model*

ISO/IEC 19501:2005, *Information technology – Open Distributed Processing – Unified Modeling Language (UML)* Version 1.4.2

3 Terms, definitions, symbols, abbreviated terms and conventions

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 62453-1, IEC 62453-2, IEC/TR 62453-41 and the following apply.

3.1.1
screen reader
software application that provides additional output to users (e.g. text-to-sound, braille)

3.1.2
navigation tree
GUI element, which displays the navigation information by means of a tree (e.g. tree control)

3.2 Symbols and abbreviated terms

For the purposes of this document, the symbols and abbreviations given in IEC 62453-1, IEC 62453-2, IEC/TR 62453-41 and the following apply.

GUI Graphical User Interface

SAI GLOBAL

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