

TECHNICAL REPORT



**Field device tool (FDT) interface specification –
Part 52-90: Communication implementation for common language
infrastructure – IEC 61784 CPF 9**

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CONTENTS

FOREWORD.....	5
INTRODUCTION.....	7
1 Scope.....	8
2 Normative references	8
3 Terms, definitions, symbols, abbreviated terms and conventions	8
3.1 Terms and definitions.....	8
3.2 Symbols and abbreviated terms	9
3.3 Conventions.....	9
3.3.1 Datatype names and references to datatypes	9
3.3.2 Vocabulary for requirements	9
3.3.3 Use of UML	9
4 Bus category	9
5 Access to instance and device data	9
5.1 General.....	9
5.2 IO signals provided by DTM.....	9
5.3 Data interfaces	10
5.3.1 General	10
5.3.2 Mapping HART datatypes to FDT datatypes	10
5.3.3 SemanticInfo	11
5.3.4 Data exposure using IDeviceData and IInstanceData interfaces	12
6 Protocol specific behaviour.....	18
6.1 Support of burst mode	18
6.2 Device addressing	19
6.3 Support of scanning.....	19
6.4 Support of extended command numbers	19
6.5 Support for handling of communication failures and time-outs.....	19
6.6 Support for handling of Delayed Responses.....	20
6.7 Support for topologies with mixed HART protocols.....	20
6.8 Support for nested communication with multiple gateways	20
6.9 Support for topologies with WirelessHART	20
6.10 Transparent gateways.....	20
6.10.1 General	20
6.10.2 Scenario 1 – Manual topology creation	20
6.10.3 Scenario 2 – Topology scan and add	21
7 Protocol specific usage of general datatypes	21
8 Protocol specific common datatypes.....	21
8.1 HartDeviceAddress datatype.....	21
8.2 HartDeviceIpAddress datatype.....	22
8.3 HartDeviceWirelessAddress datatype	23
9 Network management datatypes	24
10 Communication datatypes.....	24
10.1 General.....	24
10.2 HartConnectRequest datatype	24
10.3 HartConnectResponse datatype.....	25
10.4 HartLongAddress datatype.....	26
10.5 HartDisconnectRequest datatype	26

10.6	HartDisconnectResponse datatype	27
10.7	HartTransactionRequest datatype	27
10.8	HartTransactionResponse datatype	28
10.9	HartStatus datatype	29
10.10	HartAbortMessage datatype	29
10.11	HartSubscribeRequest datatype	30
10.12	HartSubscribeResponse datatype	30
10.13	HartUnsubscribeRequest datatype	30
10.14	HartUnsubscribeResponse datatype	31
11	Datatypes for process data information	31
11.1	General	31
11.2	HartIOSignalInfo datatype	32
12	Device identification datatypes	33
12.1	General	33
12.2	HartDeviceScanInfo datatype	33
12.3	HartDeviceIdentInfo datatype	37
12.4	Mapping of information source	38
	Bibliography	41
	Figure 1 – Part 52-90 of the IEC 62453 series	7
	Figure 2 – Structural information for device variables	16
	Figure 3 – Structural information for dynamic variables	17
	Figure 4 – Structural information for extended device status	18
	Figure 5 – Device-initiated data transfer with burst mode	19
	Figure 6 – HartDeviceAddress datatype	21
	Figure 7 – HartDeviceIpAddress datatype	22
	Figure 8 – HartDeviceWirelessAddress datatype	23
	Figure 9 – HartNetworkData datatype	24
	Figure 10 – HartConnectRequest datatype	25
	Figure 11 – HartConnectResponse datatype	26
	Figure 12 – HartDisconnectRequest datatype	27
	Figure 13 – HartDisconnectResponse datatype	27
	Figure 14 – HartTransactionRequest datatype	28
	Figure 15 – HartTransactionResponse datatype	28
	Figure 16 – HartAbortMessage datatype	29
	Figure 17 – HartSubscribeRequest datatype	30
	Figure 18 – HartSubscribeResponse datatype	30
	Figure 19 – HartUnsubscribeRequest datatype	31
	Figure 20 – HartUnsubscribeResponse datatype	31
	Figure 21 – HartIOSignalInfo datatype	32
	Figure 22 – HartDeviceScanInfo datatype	33
	Figure 23 – HartDeviceIdentInfo datatype	37
	Table 1 – Output signal info within IOSignalInfo / HartIOSignalInfo	10
	Table 2 – Mapping of basic datatypes	11

Table 3 – SemanticInfo attributes description.....	12
Table 4 – Basic Variables exported in IDeviceData and IInstanceData interfaces.....	13
Table 5 – Basic Variables exported only in IDeviceData interface	15
Table 6 – Protocol specific usage of general datatypes.....	21
Table 7 – HartDeviceAddress datatype	22
Table 8 – HartDeviceIpAddress datatype	23
Table 9 – HartDeviceWirelessAddress datatype	24
Table 10 – HartNetworkData datatype.....	24
Table 11 – HartConnectRequest datatype	25
Table 12 – HartConnectResponse datatype	26
Table 13 – HartLongAddress datatype	26
Table 14 – HartDisconnectRequest datatype	27
Table 15 – HartDisconnectResponse datatype	27
Table 16 – HartTransactionRequest datatype	28
Table 17 – HartTransactionResponse datatype	29
Table 18 – HartStatus datatype.....	29
Table 19 – HartAbortMessage datatype	29
Table 20 – HartSubscribeRequest datatype	30
Table 21 – HartSubscribeResponse datatype.....	30
Table 22 – HartUnsubscribeRequest datatype	31
Table 23 – HartUnsubscribeResponse datatype	31
Table 24 – Usage of IOSignalInfo datatype	32
Table 25 – HartIOSignalInfo datatype	32
Table 26 – HartDeviceScanInfo datatype	33
Table 27 – Protocol specific mapping of scan information	35
Table 28 – HartDeviceIdentInfo datatype	37
Table 29 – Protocol specific mapping of identity information	39

INTERNATIONAL ELECTROTECHNICAL COMMISSION

FIELD DEVICE TOOL (FDT) INTERFACE SPECIFICATION –

Part 52-90: Communication implementation for common language infrastructure – IEC 61784 CPF 9

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IEC TR 62453-52-90, 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.

Each part of the IEC 62453-52-xy series is intended to be read in conjunction with its corresponding part in the IEC 62453-3xy series. This document corresponds to IEC 62453-309.

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

Enquiry draft	Report on voting
65E/440/DTR	65E/514/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 document 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 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.

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

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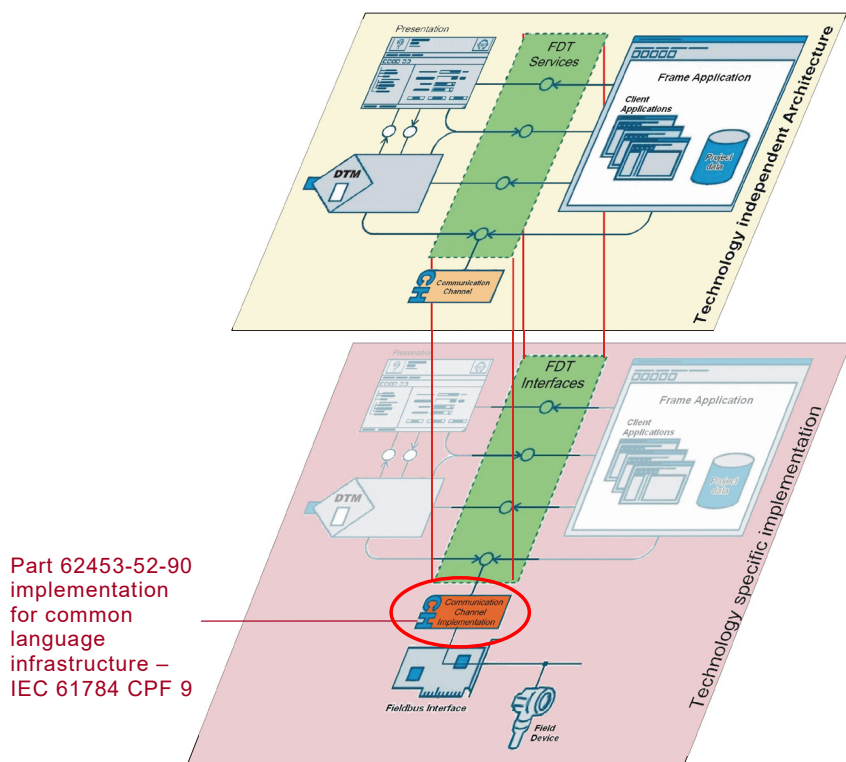
INTRODUCTION

This part of IEC 62453 is an interface specification for developers of Field Device Tool (FDT) 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, called Device Type Manager (DTM), 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 kind of fieldbuses and thus meets the requirements for integrating different kinds of devices into heterogeneous control systems.

Figure 1 shows how this part of the IEC TR 62453-52-xy series is aligned in the structure of the IEC 62453 series.



IEC

Figure 1 – Part 52-90 of the IEC 62453 series

FIELD DEVICE TOOL (FDT) INTERFACE SPECIFICATION –

Part 52-90: Communication implementation for common language infrastructure – IEC 61784 CPF 9

1 Scope

This part of the IEC 62453-52-xy series, which is a Technical Report, provides information for integrating the HART®¹ technology into the CLI-based implementation of FDT interface specification (IEC TR 62453-42).

This part of IEC 62453 specifies implementation of communication and other services based on IEC 62453-309.

This document neither contains the FDT specification nor modifies it.

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 61784-1:2014, *Industrial communication networks – Profiles – Part 1: Fieldbus profiles*

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

IEC 62453-2:2016, *Field device tool (FDT) interface specification – Part 2: Concepts and detailed description*

IEC TR 62453-42:2016, *Field device tool (FDT) interface specification – Part 42: Object model integration profile – Common language infrastructure*

IEC 62453-309:2016, *Field device tool (FDT) interface specification – Part 309: Communication profile integration – IEC 61784 CPF 9*

¹ HART ® is the trade name of a product supplied by HART Communication Foundation. This information is given for convenience of users of this document and does not constitute an endorsement by IEC of the product named. Equivalent products may be used if they can be shown to lead to the same results.