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**AMERICAN NATIONAL STANDARD**

**ANSI/ISA–62453-302 (103.00.04)–2011**

# *Field device tool (FDT) interface specification – Part 302: Communication profile integration – IEC 61784 CPF 2*

**Approved 31 May 2011**

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## INTRODUCTION

This part of ~~IEC~~ ISA 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 fieldbusses 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 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.

Figure 1 shows how ~~IEC~~ ISA-62453-302 is aligned in the structure of the ~~IEC~~ ISA 62453 series.

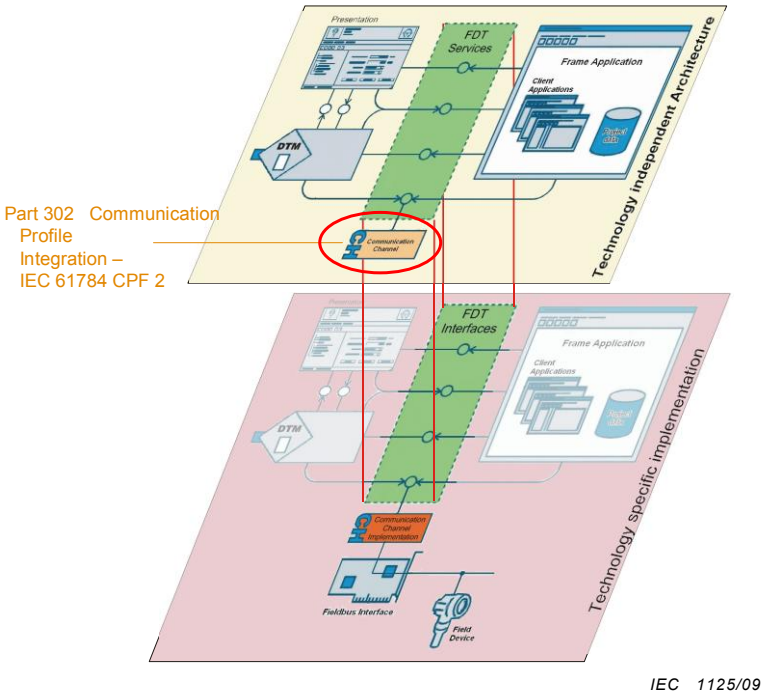


**Figure 1 – Part 302 of the ~~IEC~~ ISA-62453 series**

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**FIELD DEVICE TOOL (FDT) INTERFACE SPECIFICATION –**
**Part 302: Communication profile integration – IEC 61784 CPF *2***

## 1 Scope

Communication Profile Family 2 (commonly known as CIP™[1]) defines communication profiles based on IEC 61158-2 Type 2, IEC 61158-3-2, IEC 61158-4-2, IEC 61158-5-2, IEC 61158-6-2, and IEC 62026-3. The basic profiles CP 2/1 (ControlNet™[2]), CP 2/2 (EtherNet/IP™[3]), and CP 2/3 (DeviceNet™[1]) are defined in IEC 61784-1 and IEC 61784-2. An additional communication profile (CompoNet™[1]), also based on CIP™, is defined in [14].

This part of ~~IEC~~ ISA-62453 provides information for integrating the CIP™ technology into the FDT interface specification (~~IEC~~ ISA-62453-2 [103.00.02]).

This part of ~~IEC~~ ISA-62453 specifies communication and other services.

This specification neither contains the FDT specification nor modifies it.

## 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 61158-2, *Industrial communication networks – Fieldbus specifications – Part 2: Physical layer specification and service definition*

IEC 61158-3-2, *Industrial communication networks – Fieldbus specifications – Part 3-2: Data-link layer service definition – Type 2 elements*

IEC 61158-4-2, *Industrial communication networks – Fieldbus specifications – Part 4-2: Data-link layer protocol specification – Type 2 elements*

IEC 61158-5-2:2007, *Industrial communication networks – Fieldbus specifications – Part 5-2: Application layer service definition – Type 2 elements*

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