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AMERICAN NATIONAL STANDARD

ANSI/ISA–62453-309 (103.00.08)-2011

Field device tool (FDT) interface specification – Part 309: Communication profile integration – IEC 61784 CPF 9

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 kind of fieldbusses and thus meets the requirements for integrating different kinds of devices into heterogeneous control systems.

Figure 1 shows how ~~IEC~~ ISA-62453-309 (103.00.08) is aligned in the structure of the ~~IEC~~ ISA-62453 series.

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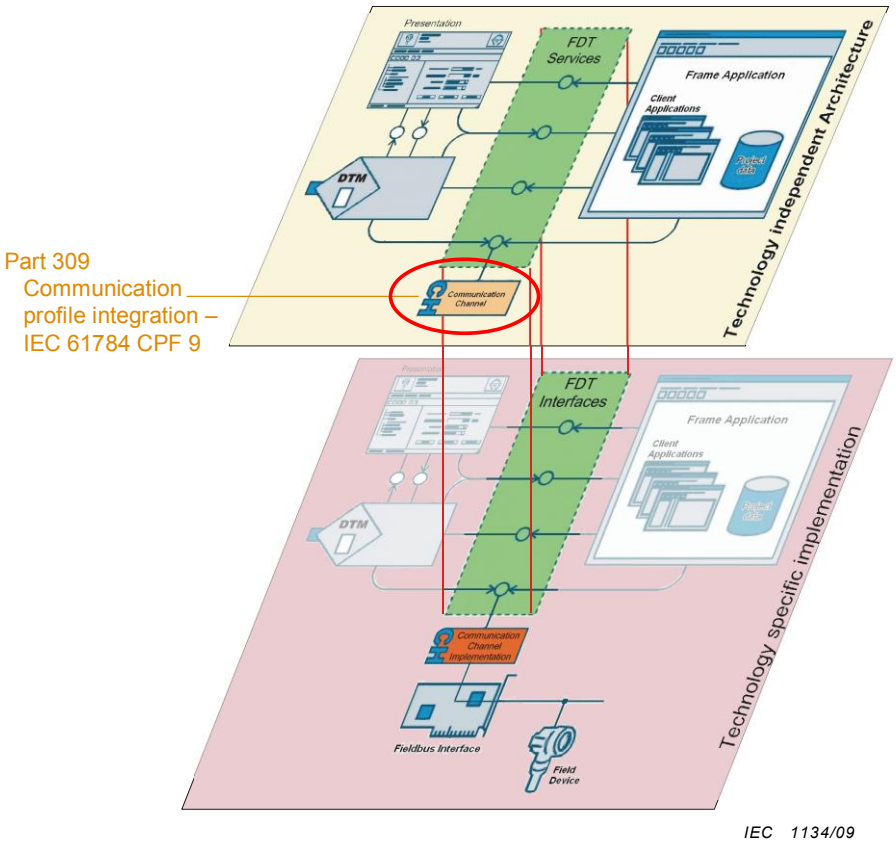

Figure 1 – Part 309 of the IEC 62453 series

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

1 Scope

Communication Profile Family 9 (commonly known as HART®[1]) defines communication profiles based on IEC 61158-5-20 and IEC 61158-6-20. The basic profile CP 9/1 is defined in IEC 61784-1.

This part of ~~IEC~~ ISA-62453 provides information for integrating the HART® technology into the FDT standard (~~IEC~~ ISA-62453-2 [103.00.02]).

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

This standard neither contains the FDT specification nor modifies it.

2 Normative references

The following referenced documents are indispensable for the application of this specification. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies

IEC 61158-5-20, *Industrial communication networks – Fieldbus specifications – Part 5-20: Application layer service definition – Type 20 elements*

IEC 61158-6-20, *Industrial communication networks – Fieldbus specifications – Part 6-20: Application layer protocol specification – Type 20 elements*

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

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*

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~~ ISA-62453-1(103.00.01) and ~~IEC~~ ISA-62453-2 (103.00.02) and the following apply.

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[1] HART ® is the trade name of the 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 or ISA of the product named. Equivalent products may be used if they can be shown to lead to the same results.