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**NATIONAL STANDARD OF THE
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**Interoperation guide for field device tool (FDT) /device type
manager (DTM) and electronic device description language
(EDDL)**

(English Translation)

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References

Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard is modified to use IEC/T R62795.2013 "Field Device Tool (FDT)/Device Type Manager (DTM) and electronic equipment Description language (EDDL) interoperability specification. " this standard is based on GB/T 1.1 IEC/T R62795.2013 made the following structural changes.

- Remove the foreword IEC/T R62795.2013, re-written the foreword of this section;
- Some paragraphs have been reorganized;
- Part of the technical description of the supplement;
- In the first chapter of this standard, an increase of part of the demand description;
- In the second chapter of this standard, an increase of normative references;
- In the third chapter of this standard, added some terms;
- IEC standard 4.2.2 under 1) split into 4.2.2 under this standard a) and b);
- The standard of Figure 1, Figure 2 Remove the IEC standard Figure1, Figure2 begin and end;
- IEC standard 4.3.3 under 1), 2) split into 4.3.3 under the standard a), b), c), d);
- IEC standard 5.2.1General in this standard is not a separate section;
- The contents of the IEC standard 5.3TherequirementsofEDDdocumentformat supplement, reorganized into two Bar
- This standard complements the "header of the file in Table 3 Binary Standard Documents";
- This standard supplements the "Appendix A (informative) binary file format." this standard is based on GB/T 1.1 of IEC/T R62795.2013 made the following editorial changes.
- Where "IEC/T R62795" place to "GB/T 34076";
- According to the Chinese habit of some layout format has been modified;
- Some of the statements applicable to international standards to adapt to our standard

statement.

This standard is proposed by the China Machinery Industry Federation.

This standard by the National Institute of Industrial Process Control and Automation Standardization Technical Committee (SAC/TC124) centralized.

This standard was drafted unit. Southwest University, Mechanical Industry Instrumentation Technology Institute of Economics, China Sihe Instrumentation Group.

Introduction

There are currently two IEC devices integrated with the international standard GB/T 21099.3 (Electronic Device Description Language, EDDL) and GB/T 29618 (FieldDeviceTool, FDT), these two standards have their own characteristics. Using EDDL and FDT technology manufacturers and use More and more households are investing in both EDDL and FDT technologies.

EDD technology is the transfer of device properties from the configuration tool's software code to a data set and the use of electronic description language (EDDL) Description The properties of a device are stored on the device's site or in the server of the control system. Communication protocols such as FF, HART, etc., Interaction between field devices and control systems.

FDT is an acronym for field device tools, an open, independent, and open software interface specification. The FDT specification describes the engineering box Software interfaces and interdependencies between racks (FDT containers, FDT framework applications) and device software components (DTMs, Device Type Managers).

The application of FDT frame has nothing to do with the equipment and the field bus system, but the DTM is related to the specific equipment and the field bus.

Some automation vendors and users support both technologies and have the need to generate DTMs via EDD. Relevant conversions already exist Tools, but due to the conversion tools, EDD files, parsing methods, interface styles and other aspects of different, resulting in poor consistency of DTM generated.

In order to solve this problem, we need relevant norms to guarantee. There is a great complementarity between EDDL and FDT, but the current lack is EDDL and FDT integrated specification, the complementarity between the two technologies failed to give full play. Development of EDD to FDT conversion standards and the technical specifications that EDD integrates into the FDT framework help to combine the two standards to deliver the full breadth of technology. This conversion standard Built on the existing EDDL and FDT technologies, the investment required is small.

At present, FDI hopes to integrate EDD and FDT under the framework of FDI and is doing

standardization work. However, EDD straight Then converted to DTM, and then integrated into the FDT, more targeted, more direct, more investment savings. FDT Integrated EDD specification helps to promote the integration of two kinds of equipment integration technology, to ensure the consistency of EDD after conversion to DTM.

This standard gives the basic requirements of EDD to FDT conversion, standardize the integration of EDD to FDT framework, guide EDD files to DTM conversion and conversion tools related to the development of EDD to DTM after the basic parameters described in the business logic, error handling, Storage management, interface styles and so on.

Field Device Tool (FDT)/Device Type Manager (DTM) and Electronic Device Description Language (EDDL) interoperability specification

1 Scope

FDT and EDDL are two mainstream device integration technologies. Both are widely used in equipment integration. Two methods of technical reality Now is different, the performance of the product is also different. At present, there is still a lack of interoperability between the two products, lack of a mutual migration path, Difficult to co-exist and at the same time play the advantages of both technologies. Therefore, there is a need for a specification that can connect two technologies, providing a migration path to make it Interoperability between them. The combination of the two technologies gives full play to their respective advantages.

This standard is precisely to meet this demand, given EDD file transfer to FDT/DTM general requirements. FDT/DTM on Developers can apply this standard to develop EDD-DTM conversion tools. Through this tool to import, analyze, manage EDD files, and ultimately Generate the corresponding DTM. DTM generated in the function, data, appearance style to maintain a high degree of consistency. This will help the introduction of EDD into FDT also takes advantage of the benefits of the EDDL integration approach while enjoying the convenience of FDT/DTM technology.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version applies to this article Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 19769.1-2015 function block Part 1. Structure (IEC 61499-1:2005, IDT) GB/T 21099.1-2007 Function blocks for process control - Part 1. General system aspects (IEC/CDV61804-1:2003, IDT) Process control function blocks (FBs) - Part 3. Electronic Equipment Description Language (EDDL) (IEC 61804-3:2006, IDT) Specification for field device tool (FDT) interface - Part 1. Overview and guidance (IEC 62453-1).

2009, IDT)