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Test open data services (TODS)

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1:1-2009:

This standard uses the redrafting method with reference to ISO /PAS22720:2005 "ASAM Open Data Service 5:0":

The consistency of ISO /PAS22720:2005 is not equivalent:

This standard was proposed by China Machinery Industry Federation:

This standard is under the jurisdiction of the National Automation System and Integration Standardization Technical Committee (SAC/TC159):

Drafting organizations of this standard: Beijing Ruifeng Synergy Technology Co:, Ltd:, China National Institute of Standardization, Chengdu Aircraft Design Institute, China

Hangfa Sichuan Gas Turbine Research Institute, Beijing Institute of Mechanical and Electrical Engineering, Beijing Institute of Control and Electronic Technology, China Shipbuilding Industry Corporation

The 724 Research Institute, China Aviation Development Shenyang Liming Aviation Engine Co:, Ltd:, Nanjing Electronic Equipment Research Institute, AVIC Engineering Integration

Equipment Co:, Ltd:, Southwest Institute of Technology and Engineering, Beihang University:

Introduction

There are various testing, evaluation and simulation solutions in the automotive, aviation, aerospace, construction, and electronics industries, and they all have their own independent management systems:

The special format of system and data storage, and the method of information maintenance are also different: As the complexity of product innovation increases, expand and modify this

These solutions and their integration with third-party systems are becoming increasingly challenging: At the same time, because the information description is different and difficult

With access, data mining and interdisciplinary collaborative innovation based on a unified knowledge base cannot be realized, and it is difficult to apply new technologies and new methods to existing ones:

In some systems, there is an urgent need for a simple and standardized information access method: Access to product life cycle information also requires standards

Supported by standardized methods to deal with the risks caused by software tools and business discontinuities:

ISO /PAS22720:2005 is the Open Data Service (ODS) proposed by the Association for Standardization of Automation and Measurement Systems (ASAM):

The ODS standard has been widely used internationally: By standardizing the data model, interface, data exchange syntax and format, it can be used for different

The application environment provides the same data frame to solve the problem of data exchange and sharing:

In:2009, ASAM released a new version of the ODS5:2 standard: The domestic demand for data exchange and sharing in the test field is also very urgent:

Therefore, in combination with the new version of the ODS standard and domestic demand, ISO /PAS22720:2005 is revised, and with reference to ASAM ODS5:2,

Advanced Test Open Data Service (TODS) dedicated to test data:

Through the expansion of ISO /PAS22720:2005, TODS can meet the sustainability requirements of test information preservation and acquisition, reducing

Low project costs and risks, and provide a reliable data sharing and exchange standard for information systems: By using standardized interfaces

And standard data structure can reduce the difficulty of system integration in heterogeneous environment and significantly improve the efficiency of information exchange:

Pilot testing of open data services

1 Scope

This standard provides the architecture, basic model, transmission format and application programming interface of the open data service for testing and testing:

This standard is applicable to the construction of test data management system, including test data collection, storage, management, analysis, exchange and sharing, data application

Wait:

2 Normative references

The following documents are indispensable for the application of this document: For dated reference documents, only the dated version applies to this article

Pieces: For undated references, the latest version (including all amendments) applies to this document:

ISO 8601:2004 Data elements and exchange format information exchange date and time representation (Dataelementsandinter-

changeformats-Informationinterchange-Representationofdatesandtimes)

IEEE754 binary floating-point arithmetic standard (IEEEstandardforbinaryfloating-pointarithmetic)

3 Terms, definitions and abbreviations

3:1 Terms and definitions

The following terms and definitions apply to this document:

3:1:1

Basemodel

A holistic, application-independent logical data model:

Note: The model defines the structure of the test data managed in the TODS context, the