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IEEE Standard for Automatic Test Markup Language (ATML) Test Descriptions

IEEE Standards Coordination Committee 20

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IEEE Standards Coordinating Committee 20 (SCC20) on
Test and Diagnosis for Electronic Systems

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(Revision of
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IEEE Standard for Automatic Test Markup Language (ATML) Test Description

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IEEE Standards Coordinating Committee 20 (SCC20) on Test and Diagnosis for Electronic Systems

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Abstract: An exchange format, utilizing Extensible Markup Language (XML), for both the static description of unit under test (UUT), and the specific description of UUT instance information is defined in this standard.

Keywords: ATE, ATML, ATS, ATML instance document, automatic test equipment, Automatic Test Markup Language, automatic test system, IEEE 1671.1™, test program documentation, test requirements, unit under test, UUT, XML schema

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Introduction

This introduction is not part of IEEE Std 1671.1-2017, IEEE Standard for Automatic Test Markup Language (ATML) Test Description.

This child, or "dot," standard, also known as an ATML component standard, provides for the definition of the test description schemas, and contains references to XML instance document examples; both of which accompany this standard.

The XML schemas defined by this standard provide for the representation of test description information.

Where appropriate, the XML schemas utilize and reference components of the Automatic Test Markup Language (ATML) for Exchanging Automatic Test Equipment and Test Information via XML Standard (IEEE Std 1671) schema set. ATML's XML schemas define the basic information required within a test application and provide a vehicle for formally defining the test environment by defining a class hierarchy corresponding to these basic information entities and provide several methods within each to enable basic operations to be performed on these entities. ATML component standards within the ATML framework define the particular requirements within the test environment.

Contents

IEEE Standard for Automatic Test Markup Language (ATML) Test Description

1. Overview

Automatic Test Markup Language (ATML) is a collection of IEEE standards and associated Extensible Markup Language (XML) schemas that allows automatic test system (ATS) and test information to be exchanged in a common format adhering to the XML specifications.[1]

The ATML framework and the ATML family of standards have been developed and are maintained under the guidance of the IEEE Standards Coordinating Committee 20 (SCC20) and serve as a comprehensive environment for integrating design data, test strategies, test requirements, test procedures, test results management, and test system implementations, while allowing test program, test asset interoperability, and unit under test (UUT) data to be interchanged between heterogeneous systems.

This standard (as well as the XML schemas and XML instance document examples[2] that accompany this standard) is intended to be used in identifying and documenting a unit under test (UUT).

1.1 Scope

This standard defines an exchange format, utilizing Extensible Markup Language (XML), for specifying test performance, test conditions, diagnostic requirements, and support equipment to locate, align, and verify the proper operation of a unit under test (UUT). This is in support of the life cycle of test program sets (TPSs) that will be used in an automatic test environment.

1.2 Application

1.2.1 Of this document

This standard provides for test descriptions to be utilized for a variety of purposes, including test program generation, test requirement document (TRD) development and maintenance (MIL-STD-1345B [B10]

[1]This information is given for the convenience of users of this standard and does not constitute an endorsement by the IEEE of this consortium standard. Equivalent standards or products may be used if they can be shown to lead to the same results.
[2]The XML schemas and XML instance document examples that accompany this standard are available at the locations defined in Annex E.