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IEEE Standard for Automatic Test Markup Language (ATML) Unit Under Test (UUT) Description

IEEE Standards Coordinating Committee 20

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

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IEEE Std 1671.3™-2017
(Revision of
IEEE Std 1671.3-2007)

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IEEE Standards Coordinating Committee 20 on Test and Diagnosis of Electronic Systems
of the
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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: automatic test equipment (ATE), Automatic Test Markup Language (ATML), ATML Instance Document, automatic test system (ATS), IEEE 1671.3™, unit under test (UUT), XML schema

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Introduction

This introduction is not part of IEEE Std 1671.3-2017, IEEE Standard for Automatic Test Markup Language (ATML) Unit Under Test (UUT) Description.

This child, or "dot," standard, also known as an ATML component standard, provides for the definition of the unit under test XML 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 identification and definition of a unit under test (UUT).

Where appropriate, the XML schemas utilize and reference components of the ATML for Exchanging Automatic Test Equipment and Test Information via XML Standard (IEEE Std 1671) schemas. ATML's XML schemas define the basic information required within any 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) Unit Under Test (UUT) 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.

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) to 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 that accompany this standard) is intended to be used in identifying and documenting a UUT.

1.1 Scope

This standard defines an exchange format, utilizing Extensible Markup Language (XML), for both the static description of a UUT and the specific description of UUT instance information.

1.2 Application

1.2.1 Of this document

This standard provides for the identification of static characteristics of either a hardware or a software UUT. Characteristics are descriptive attributes relating to a UUT's form, fit, and function. This collection of characteristics defines either a class or type of UUT (as represented by the "UUTDescription.xsd" schema defined in Clause 4) or a specific UUT (as represented by the "UUTInstance.xsd" schema defined in Clause 5). Either collection of characteristics may be used for the purposes of developing test fixtures (holding and/or interface devices), interfacing (such as electrical cabling or optical interfaces), or defining a test configuration.