SyncML Conformance Testing Process, version 1.0

Abstract

The SyncML Conformance Testing Process is created to enable companies implementing the SyncML Specifications to demonstrate that such products are conformant with the SyncML Specification. This document describes the process of accomplishing such conformance testing activities necessary to assess the conformance of a SyncML implementation.

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0.5	2002-02-01	Updated to remove manual test cases and mandate SCTS Test tool.
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1 Introduction

The purpose of this specification is to define SyncML Conformance Testing process. Any SyncML vendor who is willing to bring SyncML implementations to the markets is intended to go through this process. After accomplishing this process, a vendor has the right to license the "SyncML conformant" for usage in product marketing.

Chapter two briefly presents the SyncML Interoperability Committee (SIC) [5]. SIC is responsible for developing and running SyncML Conformance Testing Process. Chapter three describes the actual SyncML Conformance Testing Process. The process consists of three main phases: preparation for testing, test operations and conformance testing completion. Those phases construct the complete process that has to be followed in order to have the right to license "SyncML conformant" usage for product marketing. Chapter four gives a brief introduction to the SyncML Conformance Test Suite (SCTS) [4]. SCTS is a subject of different specification [4] and therefore it is not described exhaustively in this document.

SyncML initiative has also SyncML Interoperability Testing Process [3]. In order to get the right to license the SyncML logo, a vendor has to accomplish that process. SyncML Conformance Testing Process is a pre-requirement for the SyncML Interoperability Process. A vendor is encouraged to accomplish also SyncML Interoperability Process before entering any implementation to the market. The only reason not to accomplish interoperability part is that the implementation is using a data object(s) that is not supported by other manufacturers. If support becomes available in some future date from other manufacturers it is strongly recommended that interoperability testing will be accomplished afterwards.

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2 SyncML Interoperability Committee

SyncML Interoperability Committee (SIC) [5] is formed from the representatives of SyncML sponsor companies. The SIC is responsible to organize and define SyncML Conformance Testing Process and provide appropriate specifications and tools. The SIC is also responsible to make decisions related to problem situations. An example of a problem situation is an inconclusive outcome in testing (where neither pass nor fail verdict can be given).

The SIC can assign some of the tasks related to SyncML conformance process to a 3rd party. E.g. test tool development, distribution of conformance testing documents and administration services.

The SIC is also responsible to communicate with SyncML Technical Committee in cases such as question of interpretation and flaws in SyncML technical specifications.

Please refer to SyncML web pages (www.syncml.org) to find up-to-date information about SyncML Interoperability Committee.

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3 SyncML Conformance Testing Process

This chapter defines SyncML conformance testing process. ISO Standard [1] has been used as a framework for this process.

3.1 Process overview

Figure 1 gives an overview of SyncML Conformance Testing Process. The process consists of three main phases: preparation for testing, test operations and conformance testing completion. These phases are described in sub-chapters below with more detail.

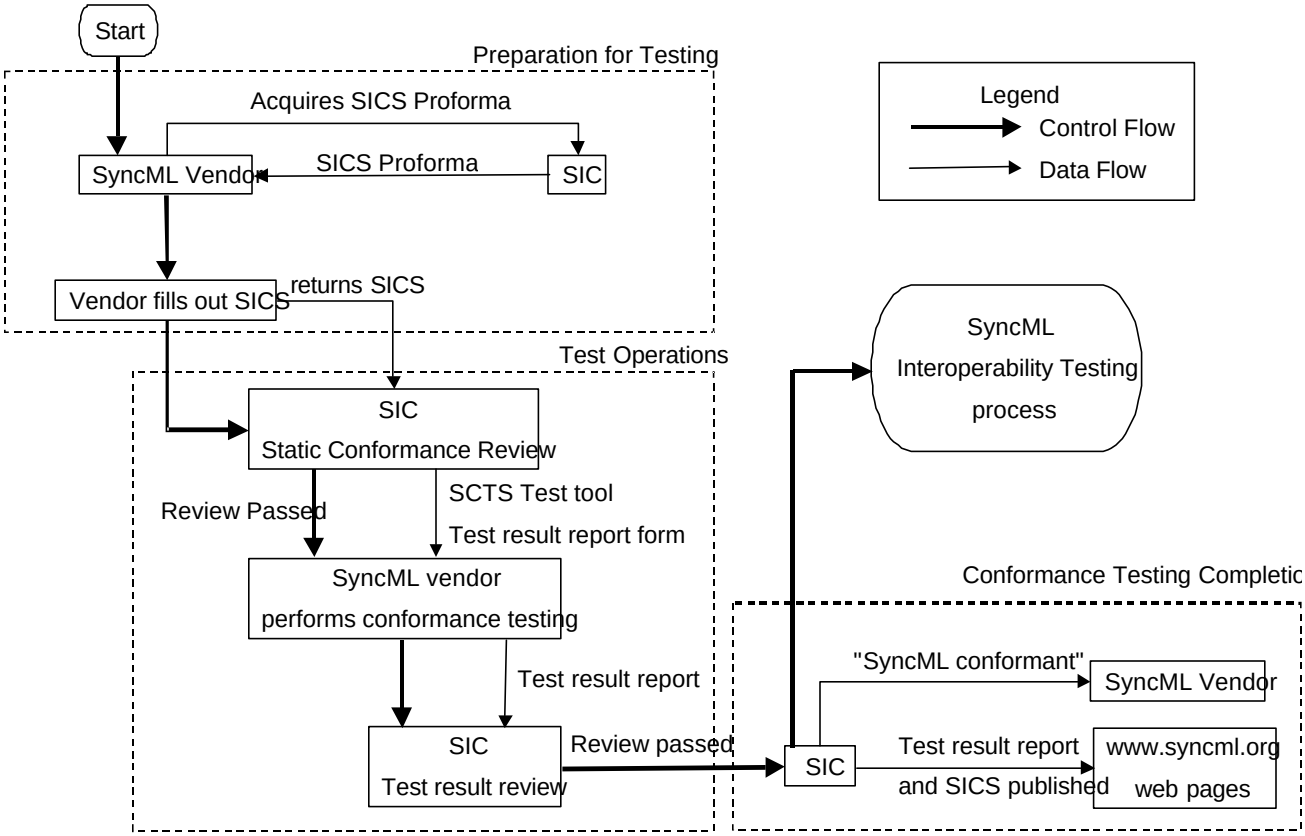

Figure 1 SyncML Conformance Testing Process Diagram

The SyncML Conformance Testing Process diagram (Figure 1) is based on assumption that static conformance review and test result review are passed successfully. Please note that SIC can also give a failure result in these reviews if the SICS or test result report do not fulfill requirements specified in this document.

3.1.1 Preparation for Testing

If a SyncML Vendor is willing to enter a product to SyncML conformance process, it has to acquire SyncML Implementation Conformance Statement Proforma (SICS) from SyncML Interoperability

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Committee (SIC). This is the first step in SyncML conformance process. Information about SIC and how to acquire SICS Proforma can be found from SyncML web pages (www.syncml.org).

SyncML Implementation Conformance Statement (SICS) Proforma is a questionnaire document. SICS Proforma is derived from respective SyncML specifications by converting the static conformance requirements into questions. SICS Proforma becomes SICS after vendor has provided appropriate answers to the questions. [2]

Preparation for testing has been done after a vendor has delivered SICS for the SyncML Interoperability Committee. There is time limit for returning SICS prior to SyncFest events. If vendor is willing to participate some certain SyncFest, the deadline for delivering SICS prior to that event has to be followed. Deadlines for each SyncFest events are defined in SyncML web pages.

3.1.2 Test Operations

The actual test operations start from the Static Conformance Review (SCR). SCR is conducted by analyzing the SICS with respect to the relevant static conformance requirements. In order to pass, all MUST requirements in the SICS have to be implemented in that particular product.

After vendor's SICS has passed the SCR, SIC will sent SyncML Conformance Test Suite (SCTS) [4] Test Tool to the vendor. In order to get SCTS, the vendor has to accept terms of the usage and remit possible payments. SIC will also provide test report form for the vendor to be filled out after conformance tests are performed.

Actual testing is based on performing running the test cases within the SCTS test tool(s) (as defined in SCTS specification) that were provided by SyncML Interoperability Committee. Test report form has to be filled out after vendor (or some 3rd party on behalf of vendor) has performed testing. Test result report has to be delivered for the SIC. Such as in case of SICS, the deadline for delivering test reports prior SyncFest is defined in SyncML web pages and delivery has to happen within that time limit.

The SIC reviews test result report. A criterion for passing this review is that test report indicate passed result for every test case that is relevant for that particular implementation. Minimum requirement for every implementation is to support MUST SCRs (this is stated in SICS). Therefore, the minimum pass criteria are to pass all the test cases that are created to test MUST SCRs. If vendor has indicated in SICS that implementation supports also other SCRs then it has to pass also those test cases that are created to test those particular SCRs (MAY and SHOULD categories).

3.1.3 Conformance Testing Completion

Once test result report review has been completed and passed, the SIC informs SyncML vendor about the right to license "SyncML Conformant" usage in product marketing. Vendor has no right to use "SyncML Conformant" phrasing before the license agreement has been completed.

If requested by vendor, test result report and SICS received from vendor will be published in SyncML web pages (www.syncml.org). This happens only for the test case results that have successfully passed the SIC review and if it is not possible for that particular product to accomplish interoperability requirements. SICSs can be used later on within SyncML interoperability testing process in order to find out interoperability demonstration partners.

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The SyncML Conformance testing process has to be repeated for every new release of product that is based on a new point release of SyncML specifications (such as SyncML 1.x.y specifications).

3.1.4 SyncML Interoperability Testing Process

In order to gain the right to license the "SyncML logo", the vendor has to go through SyncML Interoperability Testing Process. SyncML Interoperability Testing Process is a subject of different document [3].

3.2 Problem handling

Presumably (as in any new technology) there will be flaws in SyncML Technical Specifications, SCTS and in the conformance testing process itself. Also, conformance testing itself will introduce problems related to testing in general, such as inconclusive outcomes in test results.

Problem reports related to conformance testing should be submitted to the SIC. Instructions how to submit problem reports can be found on SyncML web pages (www.syncml.org).

The SIC will review all the problem reports and make decision about the course of actions if any.

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4 SyncML Conformance Test Suite

The SyncML Interoperability Committee (SIC) will introduce test cases or test tools for SyncML Conformance Testing. The SyncML Conformance Test Suite (SCTS) term is used to cover all the items that are used during the actual test operation phase of SyncML Conformance Testing process.

SyncML Vendor is required to use only the version of SCTS assigned by SIC. SIC has the right to provide updates to SCTS and assign a new version of SCTS. In case of an update, the vendor is required to use a new version of SCTS and no old versions are allowed to be used for SyncML Conformance Testing.

4.1 SyncML Conformance Test Suite Specification

SIC will provide SCTS Specification that gives guidelines how to use SCTS and what kind of test cases or test tools is available for SyncML Conformance Testing. Please refer to this document in order to find out more about practical issues related to SCTS. [4]

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5 Terminology

5.1 Definitions

Interoperability testing process – SyncML Interoperability follows the SyncML Conformance Testing Process. The Interoperability Testing Process requires a vendor to demonstrate SyncML implementation functionality against other manufacturers' SyncML implementation.

SyncML Conformance Testing – involves testing of the capabilities and behavior of a SyncML implementation against what the implementor states in the SICS. It does not include testing of items such as performance or reliability of an implementation.

SyncML vendor – In this document, SyncML vendor is any manufacturer that introduces its' product for SyncML Conformance Testing.

5.2 Abbreviations

BIT	Basic Interconnection Tests
ICS	Implementation Conformance Statement
IOP	Interoperability
ISO	the International Organization for Standardization
SCR	Static Conformance Review
SCTS	SyncML Conformance Test Suite
SIC	SyncML Interoperability Committee
SICS	SyncML Implementation Conformance Statement

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6 References

[1] ISO 9646 – Information Technology – Open Systems Interconnection – Conformance testing methodology and framework – Part 1: General Concepts, Second edition, 1994-12-15

[2] SyncML Implementation Conformance Statement Proforma

[3] SyncML Interoperability Testing Process

[4] SyncML Conformance Test Suite Specification

[5] SyncML Interoperability Committee (SIC) charter

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