WAP Conformance Process and Certification Policy

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1 General Information

1.1 Document Purpose and Scope

This document defines the policies to be used in the operation of the certification program for WAP clients and servers.
Although this document is not intended to define how the policies are to be implemented, some implementation detail is included to aid understanding.

1.2 Award of WAP Certification Mark

Awarding of the WAP Certification Mark solely constitutes the WAP Forum's and CA's judgment that a DUT has met or exceeded the requirements specified in this document and subsequent WAP test plans. Awarding of the WAP Certification Mark is not an endorsement of any product. The WAP certification program is a voluntary program and is not a requirement for sale of any device.
WAP Forum makes no charges to suppliers for product certification. The CA (or CAs) appointed by WAP Forum to provide the certification service does so on a commercial basis and will charge suppliers for the service.

1.3 Abbreviations

CA	Certification Authority
CCR	Class Conformance Requirements
CL	Connection less
CO	Connection oriented
DUT	Device Under Test
ICS	Implementation Conformance Statement
OEM	Original Equipment Manufacturer
PR	Problem Report
LA	License Agreement
SCR	Static Conformance Requirements
TSD	Test Suite Deficiency
TSMA	Test Suite Maintenance Authority
WCR	WAP Certification Report

1.4 Definitions:

‘	Not
Binary Compatible Family	Hardware and operating system platforms on which the server software run-time code runs unchanged.
Certification Authority	The organization sanctioned by the WAP Forum to run the day to day management of the certification process.
Certification Agreement	The agreement between an applicant for certification and the CA.
Certified Product	A product which has successfully completed the WAP certification process, the supplier of which has been notified by the Certification Authority to this effect.
Class Conformance Requirements	Define the list of features that are mandatory and optional for support by an implementation for conformance as a certain class of device in a WAP conformance release.
Implementation Conformance Statement	Define the list of mandatory and optional features implemented by a certain product.
Interpretations	Decisions made by the WAP Forum that elaborate or refine the meaning of a WAP Forum specification or a standard or specification referenced

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	by a WAP Forum specification
License Agreement	The trade mark license agreement(s) under which WAP Forum licenses the use of its trade marks for use in relation to certified products and in relation to conforming WAP content
Problem Report	Questions of clarification, intent or correctness concerning WAP Specifications or the WAP test suites which, if accepted by WAP Forum, are resolved into Interpretations or Test Suite Deficiencies.
REFPOOL	The complete set of devices available for WAP certification testing. WAP Forum member companies will be able to apply to provide products for inclusion in the pool of available test devices.
REFPOOL Agreement	The agreement between the supplier of a product in the REFPOOL and the WAP Forum, which sets out the conditions attached to participation in the REFPOOL, including availability, accessibility and confidentiality.
REFSET	A set of servers or clients against which a DUT will be tested for WAP Certification. The REFSET for a particular DUT will be selected from the REFPOOL by the Certification Authority.
Static Conformance Requirements	Define the list of features that are mandatory and optional for support by an implementation for conformance to a given specification.
Test Campaign	The series of test sessions in which the DUT is tested against all of the members of the REFSET.
Test Session	A single run of the test suite(s) in which the DUT is tested against one member of the REFSET
Test Suite Deficiencies	Agreed errors in a test suite, which are causing it falsely to report failures. A Test Suite Deficiency may allow certification to proceed in the presence of such errors in a test suite.
Test Suite Maintenance Authority	The WAP Forum or the organization(s) operating on the WAP Forum's behalf that maintain(s) the test suite(s).
WAP Certification Mark	The WAP Forum's certification logo or other marks as designated from time to time by the WAP Forum.
WAP Certification Report	The document produced by the CA that shows which of the claimed features of the product were subject to testing during the certification process
WAP Certified	A product is WAP Certified when it has been tested against the REFSET using the Test Campaign defined for it by the CA and the CA has accepted the Test Campaign Report as indicating that the product conforms to the relevant WAP Specifications.
WAP Software	Software, the modification of which may have a material effect on the compliance of a product to the WAP Specifications

2 Conformance Requirements

WAP Certification for client and server products is made available for each WAP Conformance Release. The definition for each WAP Conformance Release is available at http://www.wapforum.org.
The set of applicable class conformance requirements and features against which a product is certified as a result of a certification test campaign is specified in the WCR for the Certified Product.
It is an exp licit condition of WAP Certification that the supplier of a Certified Product warrants and represents that the Certified Product meets all of the conformance requirements applicable to the conformance class against which it is certified or which the supplier claims, in the ICS, that the Certified Product implements.
Inclusion, by reference, of this policy into the Certification Agreement as well as the LA means that this obligation applies to suppliers of Certified Products in respect of their Certified Products, whether or not they choose to enter into the LA.

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3 License of WAP Certification Mark

3.1 License Agreement

Once a product has been certified, the applicant may choose to enter into the LA in order to license the WAP Certification Mark. The LA allows for the Certification Mark to be used only on or in relation to Certified Products.
If the supplier of a Certified Product does not enter into the LA, the supplier may not use the WAP Certification Mark or any other WAP Forum trade mark on or in relation to the Certified Product or any other product.
Only the WAP Forum determines the style of the WAP Certification Mark and its artwork, and maintains all rights governing the WAP Certification Mark's use.

3.2 Removal of the WAP Certification Mark

The CA may at any time request suppliers of Certified Products to provide the CA with any information reasonably related to their Certified Product's conformance with the WAP Specifications.
If a Certified Product is found by any means to be no longer conformant with the WAP Specifications, the CA will notify the supplier who shall:

a) Within 90 days rectify the non-conformity and satisfy the CA of the efficacy of the rectification; or
b) Within 90 days satisfy the CA that there is no non-conformity in the Certified Product; or
c) Within 90 days cease use of the WAP trademarks in respect of the Certified Product, in which case the product ceases to be a Certified Product, or
d) Within 45 days invoke the appeals process as described in section 8 of this document.

If option d) is selected, the supplier will have 45 days from the completion of the appeals process to implement the decision or cease use of the trademark in respect of the Certified Product.
If a product ceases to be Certified Product, any and all rights the supplier may have had to use the WAP Certification Mark, and any other WAP Forum trademarks, on or in relation to that product cease immediately.
Once the WAP Certification Mark has been removed, any future use of the WAP Certification Mark in respect of that product will require re-testing and re-certification and entering into another LA.
Failure to adhere to these provisions will be a breach of the LA and shall result in its termination.

4 Testing

4.1 Test Suites

From time to time WAP Forum may introduce new test suites, either as replacements for existing suites or as part of a continuing policy of extending test suite coverage within the WAP certification program.
Test suite maintenance releases will take place to reflect interpretations, or other agreed Test Suite Deficiencies.
Test suite maintenance releases will have a 2 week beta testing period open to all WAP Forum members.
Certification will be available using the new version after faults found in the beta test have been rectified and a revised version made available which has been accepted by WAP Forum for use in the certification program. Test suite maintenance releases will replace existing releases in use for certification testing after a 3-month overlap period.
Test suite enhancement releases will take place to reflect entirely new test suites or major enhancements to existing test suites. Test suite enhancement releases will have a 3 month beta testing period open to all WAP Forum members. Certification will be available using the new version after faults found in the beta test have been rectified and a revised version made available which has been accepted by WAP Forum for use in the certification program.
Test suite enhancement releases will replace existing releases in use for certification testing after a 9-month overlap period.

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4.2 Test Process

4.2.1 ICS and WCR Overview

Based on the Class Conformance Requirements Document and the Static Conformance Requirements of individual specifications, an ICS Proforma is made available to applicants on the CA's web site.
The ICS Proforma is a set of questions about the class of the product and the entire set of features, both mandatory and optional, that have been implemented.
The completed ICS Proforma is the ICS, which is the documented set of claims for Static Conformance. The ICS is printed out and signed by the applicant and then delivered to the CA as part of the application package for certification.
The ICS is the property of the applicant.
If the supplier wishes to change administrative details such as contact names, addresses etc, the CA must be informed.
The WCR is produced by the CA when certification is complete. The WCR contains a list of all of the features for which support is claimed in the ICS and is a record of which features were covered by tests in the Test Campaign and which were not.
The WCR information of a certified product can only be updated by a full test campaign. Re-certification (test campaign with only a single REFSET device) test results do not change the WCR results.

4.2.2 Static Review and Scope of Certification

The testing part of the certification process starts with a static conformance review by the CA.
The applicant's ICS will be examined with respect to the WAP specification. If there is any inconsistency with the conformance requirements or other suspected error in the ICS, the applicant will be informed and the certification process will halt.
WAP Forum will from time to time decide which Conformance Classes are included within the scope of the WAP Certification Program.
Subject to the above, all mandatory and optional features marked as supported in the applicant's ICS are within the scope of certification. Instead of a full campaign specified by the scope of current certification, certified devices can increase the certification and test coverage through a full test campaign of partial scope (such as WTA/I or Push only) if testing scope has increased since the device was certified. This test campaign is still considered to be a full test campaign with respect to its test coverage.

4.2.3 REFSET

4.2.3.1 REFSET Selection

The CA will use best judgment in selecting the REFSET members such that testing coverage of optional features and interoperability is maximised and will use the following rules:

a) The Certification Authority shall select the particular REFSET devices from the REFPOOL for each DUT submitted.
b) The minimum number of devices in the REFSET is three.

c) The REFSET devices must have different WAP technology components (such as stack, interpreter etc.) amongst themselves.
   The only possible exception to this is to cover testing of optional features where it may be necessary to increase the size of the REFSET duplicating the technology components of the mandatory features. This situation must be avoided whenever possible.
   The maximum number of devices in the REFSET is five.
d) The optional features must be present in at least three members of the REFSET in order to mark the feature as tested in the WCR.
   The size of the REFSET may be increased as necessary to enable this, however it is expected that the size of the REFSET will be kept to the absolute minimum necessary.

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e) The DUT can share WAP technology components with at most one of the REFSET devices (except where the REFSET is greater than three as noted above for optional features).

If there are zero REFPOOL members for one or more of the bearers/features supported by an applicant, the applicant cannot be certified for those bearers/features.
The applicant has no choice in the selection of the REFSET members and must run a complete Test Session against each of them.
The CA will provide contact details to the applicant for each of the products against which they will test, but the CA will not provide any detailed logistics support such as booking time, facilities, transport or communications.
The CA will inform the suppliers of the products in the chosen REFSET that their product has been selected for inclusion in a new REFSET, and will also say in how many REFSETS the product is now included. When a Test Campaign is completed and results are submitted for certification, the CA will inform the suppliers of the products in the REFSET of the revised number of REFSETS in which their products are included.

If it is not possible for the CA to enable the start of certification testing for the DUT within the stipulated time of 4 working days, the CA will inform the applicant that testing cannot be started.
Applicants who cannot begin testing will be provided a reason along with a CA notification indicating why testing cannot commence. Applicants will be further informed that they can escalate the issue to WAP Forum via the Appeals Process in Section 8 of this document.

4.2.3.2 REFSET Changes

If the supplier of a product that is included in a REFSET voluntarily withdraws it from the REFPOOL, the REFSET will not change.

If a product included in a REFSET is removed from the REFPOOL for any of the reasons described in section 4.3, the applicant may:

1. Continue with the original REFSET, or
2. Request the CA to replace that product in the REFSET with another, or
3. Abandon the Test Campaign and certification attempt.

4.2.4 Dynamic Testing

The complete set of test sessions between the DUT and each member of the REFSET is called the test campaign.
The complete report of these test sessions is called the Test Campaign Report
Once the REFSET has been determined, the applicant will run the test suite in a pair wise fashion against each of the members of the REFSET in turn.
The central WAP Forum-approved test suite(s) and server must be used to perform all formal test sessions for certification. The approved test suite server provides features to capture test session results and to enable applicants to submit the results of a formal test session to the CA for inclusion in a Test Campaign Report.

The rules for deriving application layer test results for a test campaign from multiple test session results are as follows

Pass + Fail = Fail
Pass + Pass = Pass

The rules for deriving the protocol test results for a test campaign from multiple test session results are as follows

Fail + Inconclusive = Fail
Pass + Inconclusive = Pass
Pass + Fail = Fail
Inconclusive + Inconclusive = Inconclusive

i.e. Fail has precedence over Pass which has precedence over Inconclusive

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The precedence rules for deriving the protocol test results for each test in a single test session are as follows:

Fail + Inconclusive = Fail
Pass + Inconclusive = Pass
Pass + Fail = Fail
Inconclusive + Inconclusive = Inconclusive

i.e. Fail has precedence over Pass which has precedence over Inconclusive

A single Fail for any application or protocol test in a test session means that the test session is failed

An SCR item is marked as tested in the WCR only if the SCR item is tested and the submitted result is Pass. If there are two different test cases against one SCR item, and one passes and one is inconclusive, the WCR will show tested.

Test sessions must be run in an end to end black box environment, where one end is the DUT. Note that the end to end environment may be a simulated or real network environment. Client / server end to end test sessions must happen over the DUT bearer RF interface.
At this time there are no other conditions that must be met by an applicant with respect to how and where formal testing takes place. As and when additional test suites are introduced, WAP Forum may introduce additional requirements upon how and where testing takes place.
The test suite must be configured and parameterised to match the scope of the intended certification. Applications and test campaign results will be kept confidential to the applicant and the CA, and will be archived for 10 years.

For some specifications, WAP Forum may refer to approved external certification programs. The approved external certification programs are listed below:

- SyncML

4.2.5 Test Session Scope

Chapter 10 Appendix A on “Test Session Scope Details” outlines which tests have to performed depending on what features the client has implemented and how many bearers it supports.

The decision of which bearer should be the primary one, i.e. which bearer all applicable tests should be performed against, should be decided by the Certification Authority and should be communicated to the applicant.
The primary bearer should be selected by the Certification Authority on the following priorities:

1) To secure maximum coverage of functionality.
2) To secure economy and minimum of time consumption for certification testing

If the device is supporting more than one class of WTLS the most extensive class across all REFSET members should be used when WTLS is active.

4.2.6 Disclosure of Certification Information

Certification Information is the fact of certification, the description of the certified product and the WCR relating to a Certified Product.
Suppliers that have entered into an LA with WAP Forum are required to make Certification Information available free of charge prior to sale of Certified Products, for pre-sale consultation and inspection by prospective customers on request.
The CA will not disclose any Certification Information to any third party, including WAP Forum employees, consultants or members, without the written permission of the supplier.
If the applicant asks the CA to make Certification Information available to any third party, the CA will do so, but only if the supplier has entered into an LA with WAP Forum.

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The CA will make the Certification Information publicly available if so requested by the supplier of a Certified Product.
The CA will always hold confidential any information regarding unsuccessful applications for certification.

4.2.7 Independent Testing

Suppliers may independently contract and utilize laboratories for WAP conformance testing. The WAP Forum will in no way be held liable or accountable for the independent arrangements made by and between suppliers and laboratories.

4.3 REFPOOL

REFPOOL membership is a commitment to make a device available for use in testing in a timely manner. Failure to make a device available will result in the product being removed from the REFPOOL.
Any supplier who is willing to submit a product into the REFPOOL enters into a REFPOOL Agreement with WAP Forum that commits them to make their product accessible/available to others for formal testing. Suppliers of REFPOOL products enter into a REFPOOL Non Disclosure Agreement (REFPOOL NDA) with the CA under which an ICS and any additional information necessary (such as contact details) will be submitted to the CA.
Although certification is not a prerequisite for REFPOOL membership, once certification can be obtained, it must be obtained within 3 months. The CA will notify the supplier of the REFPOOL product when certification becomes technically feasible.
Failure to obtain certification within the 3 months will result in immediate removal of the product from the REFPOOL.
A Certified Product that is in the REFPOOL that ceases to be certified will immediately be removed from the REFPOOL
A supplier may also voluntarily withdraw their product from the REFPOOL subject to the terms of the REFPOOL Agreement, and must immediately inform the CA.
If a product is withdrawn from the REFPOOL, it will not subsequently be selected for inclusion in any REFSETS.
Upon voluntary withdrawal of a product from the REFPOOL, any prior obligations for participation in any REFSET survive and the supplier is required to make the product available for testing but only within those REFSETS.
Upon involuntary withdrawal from the REFPOOL, any prior obligations for participation in any REFSET(s) may survive at the discretion of the applicant(s) (see section 4.2.3.2).
The requirement for applicants for certification to test their products against members of the REFSET means that suppliers of products in the REFPOOL will learn in advance of other company's plans for certification. The REFPOOL agreement will include confidentiality requirements.
Applicants for certification are advised to ensure appropriate non-disclosure agreements are in place between themselves and the suppliers of the products in their REFSET, as neither the WAP Forum nor the CA accept any responsibility for information obtained by applicants or REFSET product suppliers about each others' products or any other matter during a Test Campaign.

5 Scope, Re-Test and Re-Certification of Products

Certification applies not just to a single instance of a product, but to the production run and to some family of related products, as described below.

5.1 Maintenance Releases of WAP-Related Software

For both clients, and servers, maintenance releases and field upgrades to WAP Software may take place throughout the life of the product.
To require full, formal re-test and certification for each bug fix release or patch would generate a high volume of activity, and it is doubtful whether the improvement in conformance and interoperability, if any, would justify the cost.
The supplier of a Certified Product is required to test each commercial maintenance release of WAP related software to market against the WAP Forum approved test suite maintained by the CA. Section 4.2, "Test Process", applies to this testing, with following differences –

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a) The applicant can simply reference the ICS they have previously supplied when applying for this testing to CA since this is maintenance release for an existing certified product.
b) Only 1 REFPOOL member is required in the REFSET selected by the CA for this testing.

The results of such testing will be archived by the CA. The archives will be kept for 10 years to provide an auditable trail.

	Test Requirement	Certification Requirement
Servers	One test session for each commercial maintenance release of WAP related software against one REFPOOL member specified by the CA	No re-certification required
Clients	One test session for each commercial maintenance release of WAP related software against one REFPOOL member specified by the CA.	No re-certification required

5.2 New WAP Software Versions

A major change in the WAP software constitutes a new product with respect to testing and certification. A major change in the WAP software is defined as an upgrade to a new version of the WAP specification, or a version with new WAP features, or a major restructuring of the WAP software.

	Test Requirement	Certification Requirement
Servers	Full Test Campaign	Full Certification
Clients	Full Test Campaign	Full Certification

5.3 Reduced Feature Versions

A client or server device, certified with a number of optional features, may also be sold, perhaps under a different model name, with a reduced number of features.

If there has been any major change to the WAP software, the device shall be subject to the full testing and certification, irrespective of its relationship to previously certified devices, as described for new software versions, see Section 5.2.

If the reduced features have not resulted in restructuring of the software, then the device may be re-tested and re-certified as described for bug fix releases of software, see Section 5.1.

If the optional features are configurable after manufacture without requiring modification to the software then no retest shall be required.

5.4 Different Platform Version

Different platform versions of clients constitute new products and must be subject to full test and certification irrespective of the origin of the software.

For servers, the applicant will at the time of applying for certification, define the intended scope of certification in terms of the hardware and operating system environments.

In some cases, this may involve several different hardware and operating system platforms on which the server software will run unchanged.

At the time of certification, the applicant may define a binary compatible family on the application form. The definition may be by enumeration or by description.

When selecting the REFSET, the CA will select, from the defined family, a representative platform for formal testing.

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After a product has been certified, the applicant may add platforms to the scope of certification, subject to self-certification of binary compatibility and a formal change of product details (see section 5.5 below).

	Test Requirement	Certification Requirement
Servers	None within the same binary compatible family	Change/addition to certification details in register
Clients	Full Test Campaign	Full Certification

5.5 Changes to Product Details

If a certified client or server is to be re-named or other details in the register altered with no change to the Certified Product's software or hardware operating environment, the CA will, on request, change the details in the register and supply new certificates.
The applicant will be required to indicate that there have been no material changes to the Certified Product other than the details given.

	Test Requirement	Certification Requirement
Servers	None	Re-Certification not Required
Clients	None	Re-Certification not Required

5.6 Re-Badged or OEM'ed Products

If technically identical products are to be shipped by more than one applicant, each applicant will have to go through the certification process. Each applicant will take on the commitment to conformance, but since the products are technically the same, there will only need to be one Test Campaign.
So if the baseline product is already certified, an OEM may use the test results from the original certification of the baseline product when applying for certification for the derived product.
The OEM will have to self-certify that the original Certified Product is unchanged and only the 'badge' and name are different.
The supplier of the original Certified Product will also be required to agree for the original (confidential) test results to be used to support the OEM's application for certification.

	Test Requirement	Certification Requirement
Servers	Refer to original test results	Full Certification
Clients	Refer to original test results	Full Certification

5.7 Other Variants

Except where specifically stated in this document, any other variant of a Certified Product (client or server) which may have a material affect on the compliance of a product to the WAP Specifications constitutes a new product, which will be subject to full testing and certification. Guidelines for what constitute material affect on the compliance of a product will be maintained at the CA website and updated from time to time based on experience and approval from WAP Forum.

5.8 Duration of Certification

Certification lasts for 12 months from the date at which the CA informs the supplier that certification has been achieved.

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The supplier is required to renew certification annually, and 60 days before the anniversary of certification the CA will notify the supplier that renewal is due.
At renewal, the CA will check any archived Test Session reports and the current WAP Software version together with any additional information the CA may reasonably require related to conformance of the Certified Product to the WAP Specifications. If there are no discrepancies, the CA will renew certification for 12 months and inform the supplier.

6 Problem Reports

6.1 Overview

Errors or ambiguities may be discovered in:

- the WAP Specifications or
- the underlying standards referenced by WAP Specifications

Errors may also be found in

- the WAP Test Suites or
- other test suites referenced by the WAP Forum (if any).

Problem Reports may be filed with WAP Forum to obtain resolution to such issues.
Problem Reports will go through a review by the WAP Forum. The preliminary review will provide an initial response to the applicant. If the preliminary review does not resolve the issue, a more detailed review will be undertaken.
Possible outcomes of the review process are that a Problem Report is either accepted as an error in the WAP Specifications (an Interpretation) or the WAP test suites (a Test Suite Deficiency), or rejected.
There are two principles that will be observed in assessing Problem Reports: decisions will seek always to deliver improved

- Interoperability between clients and servers, and
- Portability of content across devices

WAP Forum will publish an up-to-date list of Problem Report Resolutions that may be cited in support of applications for certification.
If the applicant is not satisfied with the result, review and appeals processes will be available
The Problem Report resolution process will allow the requester to remain anonymous, so pre-certification activity is kept entirely confidential

6.2 Problem Report Resolution Process

The process is outlined in the following diagram.

The key element of the review process is a deterministic timeline for a formal WAP Forum resolution to the Problem Report. The preliminary review stage allows simple problems to be dealt with expeditiously within 5 working days. The detailed review stage should result in a final resolution for more complicated issues within a further 10 working days. In exceptional circumstances final resolution may take longer in which case the PR will be resolved sufficiently within the 15 days to allow the certification process to proceed.
WAP Forum may retain independent experts to offer guidance in the preliminary and detailed review stages to help meet the response time.
In the case of problems related to a test suite, the Test Suite Maintenance Authority will be required to express an opinion to the Response Group within 3 working days to aid the review process.

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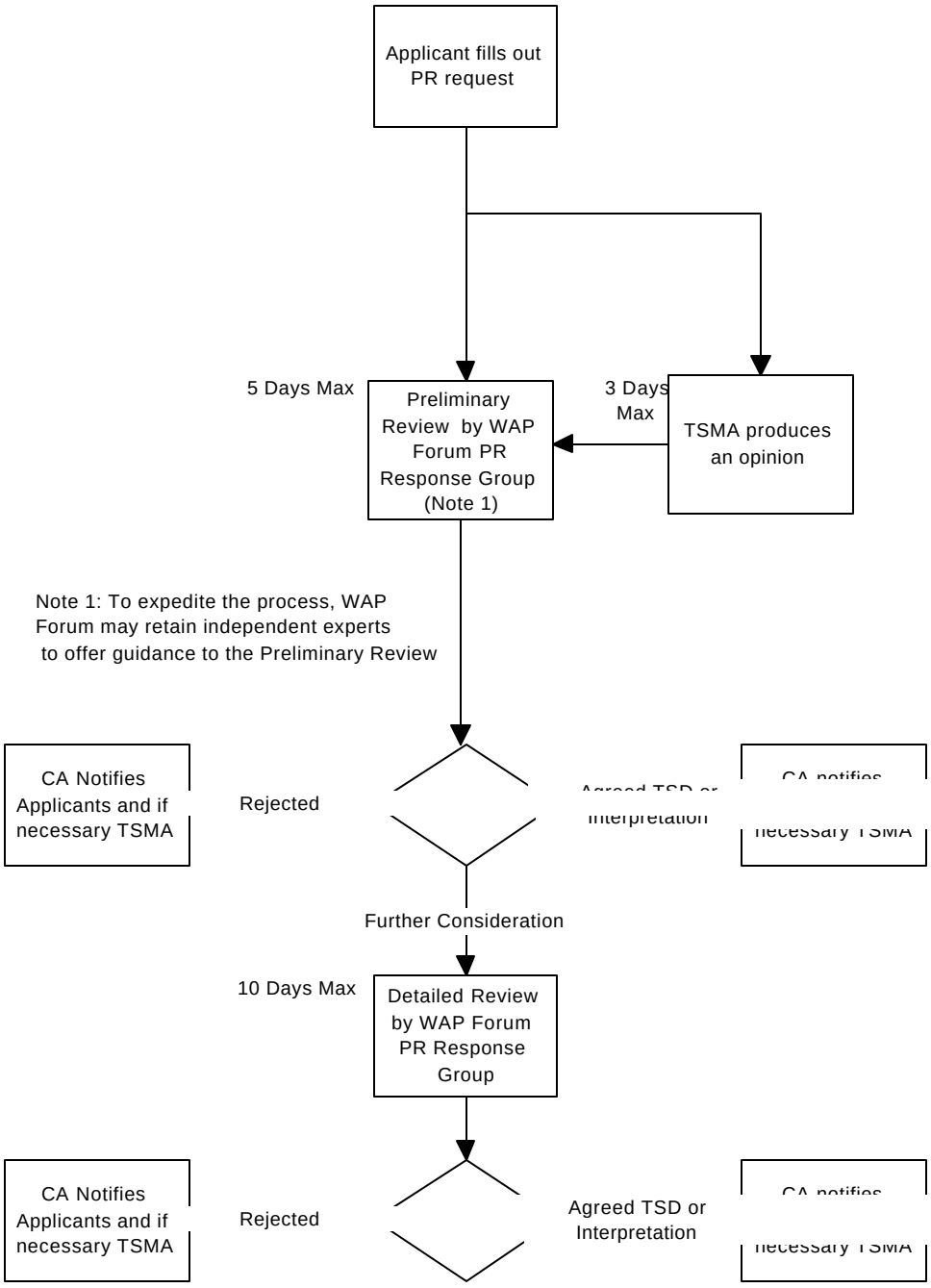

6.3 Rules for Problem Reports

Interpretations are permanent against the version of the specification to which they apply.
Test Suite Deficiencies are permanent against the version of the test suite(s) to which they apply. However, the WAP Forum reserves the right to change the ruling on a Problem Report.
In all circumstances the complete test suite or set of test suites must be run during a test campaign. The existence of any Test Suite Deficiency with respect to a test suite does not absolve an applicant from running the test in question, or any part thereof.
An applicant may cite an Interpretation or a Test Suite Deficiency to resolve discrepancies in test reports or to support their application for certification in any other way, irrespective of the origin of the Problem Report that gave rise to it.

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The Problem Reports web repository will be publicly accessible. The accessible information will contain the technical details such as the nature of the problem and its current status of resolution, but will not contain sections reserved for applicant and product details.
The effective date for a Problem Report resolution is the date recorded for the WAP Forum final opinion in the Problem Report system. Problem Report resolutions apply to all certification applications that are not yet complete.
Neither Interpretations nor Test Suite Deficiencies can cause previously certified products to be "un-certified".
Interpretations of WAP specifications will never result in product behavior that was previously considered to be conformant being declared non conformant, at a given revision level of the WAP Specifications. Interpretations may only result in product behavior that was previously considered to be non-conformant being declared to be conformant.
Applications for certification by any applicant will require the applicant to demonstrate that the product in question meets the WAP Specifications as interpreted at the time the REFSET is defined.
Interpretations remain in force until the WAP specification is updated, which means that they are permanent against a particular issue of a WAP specification.
Interpretations are always against a particular version of a WAP Specification. Therefore Problem Reports with respect to a specification which include rationale which cites conflict with a previous or subsequent version of the specification will be assessed without reference to such rationale. In particular, conflict with another version of the same WAP specification does not in itself form grounds for granting Interpretation.
WAP Forum is responsible for deciding the meaning of conformance to normative referenced specifications in the WAP context, such as IETF RFCs. Problem Reports regarding such underlying or referenced specifications in the context of WAP will be processed as normal. Problem Reports regarding underlying or referenced specifications in any other context will be rejected.

Application Process

The CA's web site describes how applicants go about applying for and achieving WAP Certification.
Applicants have 90 days from receipt of the REFSET definition after applying for certification to complete the process and submit Test Campaign results to the CA.

When applying to retest a maintenance release, applicants will have 45 days from receipt of the REFSET definition to complete the process and submit Test Campaign results to the CA.

8 Appeals process

Three occasions may give rise to appeals against decisions by the WAP Forum or the CA:

a) The applicant disagrees with WAP Forum's resolution of a Problem Report.
b) The applicant disagrees with the CA's grounds for denying the award of certification
c) The applicant disagrees with a formal notification of the need to rectify a non-conformance.
d) The applicant is unable to begin certification testing due to insufficient REFSET size.

There are to be 2 levels of appeal: a Technical Review and a Board Review.

An applicant wishing to dispute a WAP Forum or CA decision, may ask for a Technical Review by the WAP Forum. If this takes place, the application will automatically have details of applicant and product removed before being passed to the WAP Forum for review.

Technical Review requires the responsible WAP Forum working group to consider the matter and produce a response with a recorded vote according to WAP Forum's voting rules. The applicant may choose to be represented during the Technical Review meeting to present the technical case, but is not required to do so. The working group may commission reports from independent experts, and may seek input from other committees within WAP Forum as it sees fit.

If the applicant does not wish to be present, the resolution may be achieved by WAP Forum's normal electronic voting process.

Within 14 days of being notified in writing by the CA of the result of the Technical Review, the applicant may invoke an appeal to the WAP Forum Board of Directors. The applicant has the right to representation to make the

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technical case. The WAP Forum Board of Directors may ask for technical reports from the relevant working groups and may also ask for reports from independent experts. The WAP Forum Board of Directors decision will be in accordance with WAP Forum policies and procedures.

9 Confidentiality

Any confidentiality requirements regarding test results will be pursuant to the agreement between the CA and the applicant.

10 Appendix A: Test Session Scope Details

This is a normative section except for the Hours column and # Tests column which are informative.
Note! This section contains the complete test scope for all WAP Certification Programs, some of which are not applicable for all Certification Programs. Details on what test combination needs to be executed will be given by the CA upon application.

CL / 1 bearer

Session	Bearer	Cnx. Mode	WTLS	Appl. Tests	Passive Tests	Active Tests	Refset Member	Hours	# Tests
All application tests + passive protocol tests									
1	Bearer 1	CL		Full	Full if UDP		1	12	800
2	Bearer 1	Session 1		Full	Full if UDP		2	12	800
3	Bearer 1	Session 1		Full	Full if UDP		3	12	800

CL / multiple bearers

Session	Bearer	Cnx. Mode	WTLS	Appl. Tests	Passive Tests	Active Tests	Refset Member	Hours	# Tests
All application tests + passive protocol tests									
1	Bearer 1	CL		Full	Full if UDP		1	12	800
2	Bearer 1	Session 1		Full	Full if UDP		2	12	800
3	Bearer 1	Session 1		Full	Full if UDP		3	12	800
Auto application tests + passive protocol tests									
4	Bearer 2	Session 1		Auto	Full if UDP		1	4	600
5	Bearer 2	Session 1		Auto	Full if UDP		2	4	600
6	Bearer 2	Session 1		Auto	Full if UDP		3	4	600

For addtional bearers, repeat sessions 4 - 6.

CL / WTLS / 1 bearer

Session	Bearer	Cnx. Mode	WTLS	Appl. Tests	Passive Tests	Active Tests	Refset Member	Hours	# Tests
All application tests + passive protocol tests									
1	Bearer 1	CL	OFF	Full	Full if UDP		1	12	800
2	Bearer 1	Session 1	OFF	Full	Full if UDP		2	12	800
3	Bearer 1	Session 1	OFF	Full	Full if UDP		3	12	800
Auto application tests + passive protocol tests									
4	Bearer 1	Session 1	ON	Auto	Full if UDP		1	4	600

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5	Bearer 1	Session 1	ON	Auto	Full if UDP		2	4	600
6	Bearer 1	Session 1	ON	Auto	Full if UDP		3	4	600
				Active protocol tests					
7	UDP Bearer	Session 1				Full	1	10	100
8	UDP Bearer	Session 1				Full	2	10	100
9	UDP Bearer	Session 1				Full	3	10	100

CL / WTLS / multiple bearers

Session	Bearer	Cnx. Mode	WTLS	Appl. Tests	Passive Tests	Active Tests	Refset Member	Hours	# tests
				All application tests + passive protocol tests					
1	Bearer 1	CL	OFF	Full	Full if UDP		1	12	800
2	Bearer 1	Session 1	OFF	Full	Full if UDP		2	12	800
3	Bearer 1	Session 1	OFF	Full	Full if UDP		3	12	800
				Auto application tests + passive protocol tests					
4	Bearer 1	Session 1	ON	Auto	Full if UDP		1	4	600
5	Bearer 1	Session 1	ON	Auto	Full if UDP		2	4	600
6	Bearer 1	Session 1	ON	Auto	Full if UDP		3	4	600
7	Bearer 2	Session 1	ON	Auto	Full if UDP		1	4	600
8	Bearer 2	Session 1	ON	Auto	Full if UDP		2	4	600
9	Bearer 2	Session 1	ON	Auto	Full if UDP		3	4	600
10	Bearer 2	Session 1	OFF	Auto	Full if UDP		X	4	600
				Active protocol tests					
11	UDP Bearer	Session 1				Full	1	10	100
12	UDP Bearer	Session 1				Full	2	10	100
13	UDP Bearer	Session 1				Full	3	10	100

For addtional bearers, repeat sessions 7-10.

CO / 1 bearer

Session	Bearer	Cnx. Mode	WTLS	Appl. Tests	Passive Tests	Active Tests	Refset Member	Hours	# Tests
				All application tests + passive protocol tests					
1	Bearer 1	CO		Full	Full if UDP		1	12	800

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2	Bearer 1	Session 1		Full	Full if UDP		2	12	800
3	Bearer 1	Session 1		Full	Full if UDP		3	12	800
				Active protocol tests					
4	UDP Bearer	Session 1				Full	1	10	100
5	UDP Bearer	Session 1				Full	2	10	100
6	UDP Bearer	Session 1				Full	3	10	100

CO / multiple bearers

Session	Bearer	Cnx. Mode	WTLS	Appl. Tests	Passive Tests	Active Tests	Refset Member	Hours	# Tests
				All application tests + passive protocol tests					
1	Bearer 1	CO		Full	Full if UDP		1	12	800
2	Bearer 1	Session 1		Full	Full if UDP		2	12	800
3	Bearer 1	Session 1		Full	Full if UDP		3	12	800
				Auto application tests + passive protocol tests					
4	Bearer 2	Session 1		Auto	Full if UDP		1	4	600
5	Bearer 2	Session 1		Auto	Full if UDP		2	4	600
6	Bearer 2	Session 1		Auto	Full if UDP		3	4	600

For addtional bearers, repeat sessions 4 - 7.

				Active protocol tests					
8	UDP Bearer	Session 1				Full	1	10	100
9	UDP Bearer	Session 1				Full	2	10	100
10	UDP Bearer	Session 1				Full	3	10	100

CO / WTLS / 1 bearer

Session	Bearer	Cnx. Mode	WTLS	Appl. Tests	Passive Tests	Active Tests	Refset Member	Hours	# Tests
				All application tests + passive protocol tests					
1	Bearer 1	CO	OFF	Full	Full if UDP		1	12	800
2	Bearer 1	Session 1	OFF	Full	Full if UDP		2	12	800
3	Bearer 1	Session 1	OFF	Full	Full if UDP		3	12	800
				Auto application tests + passive protocol tests					
4	Bearer 1	Session 1	ON	Auto	Full if UDP		1	4	600
5	Bearer 1	Session 1	ON	Auto	Full if UDP		2	4	600
6	Bearer 1	Session 1	ON	Auto	Full if UDP		3	4	600
				Active protocol tests					
7	UDP Bearer	Session 1				Full	1	10	100

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8	UDP Bearer	Session 1				Full	2	10	100
9	UDP Bearer	Session 1				Full	3	10	100

CO / WTLS / multiple bearers

Session	Bearer	Cnx. Mode	WTLS	Appl. Tests	Passive Tests	Active Tests	Refset Member	Hours	# Tests
All application tests + passive protocol tests									
1	Bearer 1	CO	OFF	Full	Full if UDP		1	12	800
2	Bearer 1	Session 1	OFF	Full	Full if UDP		2	12	800
3	Bearer 1	Session 1	OFF	Full	Full if UDP		3	12	800
Auto application tests + passive protocol tests									
4	Bearer 1	Session 1	ON	Auto	Full if UDP		1	4	600
5	Bearer 1	Session 1	ON	Auto	Full if UDP		2	4	600
6	Bearer 1	Session 1	ON	Auto	Full if UDP		3	4	600
7	Bearer 2	Session 1	ON	Auto	Full if UDP		1	4	600
8	Bearer 2	Session 1	ON	Auto	Full if UDP		2	4	600
9	Bearer 2	Session 1	ON	Auto	Full if UDP		3	4	600
10	Bearer 2	Session 1	OFF	Auto	Full if UDP		X	4	600

For addtional bearers, repeat sessions 7-10.

Active protocol tests

11	UDP Bearer	Session 1				Full	1	10	100
12	UDP Bearer	Session 1				Full	2	10	100
13	UDP Bearer	Session 1				Full	3	10	100

CO / CL / 1 bearer

Session	Bearer	Cnx. Mode	WTLS	Appl. Tests	Passive Tests	Active Tests	Refset Member	Hours	# Tests
All application tests + passive protocol tests									
1	Bearer 1	CO or CL		Full	Full if UDP		1	12	800
2	Bearer 1	Session 1		Full	Full if UDP		2	12	800
3	Bearer 1	Session 1		Full	Full if UDP		3	12	800
Auto application tests + passive protocol tests									
4	Bearer 1	! Session 1		Auto	Full if UDP		1	4	600
5	Bearer 1	! Session 1		Auto	Full if UDP		2	4	600
6	Bearer 1	! Session 1		Auto	Full if UDP		3	4	600
Active protocol tests									
7	UDP Bearer	CO				Full	1	10	100

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8	UDP Bearer	CO				Full	2	10	100
9	UDP Bearer	CO				Full	3	10	100

CO / CL / multiple bearers

Session	Bearer	Cnx. Mode	WTLS	Appl. Tests	Passive Tests	Active Tests	Refset Member	Hours	# Tests
All application tests + passive protocol tests									
1	Bearer 1	CO or CL		Full	Full if UDP		1	12	800
2	Bearer 1	Session 1		Full	Full if UDP		2	12	800
3	Bearer 1	Session 1		Full	Full if UDP		3	12	800
Auto application tests + passive protocol tests									
4	Bearer 1	! Session 1		Auto	Full if UDP		1	4	600
5	Bearer 1	! Session 1		Auto	Full if UDP		2	4	600
6	Bearer 1	! Session 1		Auto	Full if UDP		3	4	600
7	Bearer 2	CO		Auto	Full if UDP		1	4	600
8	Bearer 2	CO		Auto	Full if UDP		2	4	600
9	Bearer 2	CO		Auto	Full if UDP		3	4	600
10	Bearer 2	CL		Auto	Full if UDP		1	4	600
11	Bearer 2	CL		Auto	Full if UDP		2	4	600
12	Bearer 2	CL		Auto	Full if UDP		3	4	600

For additional bearers, repeat sessions 7 - 12

Active protocol tests

13	UDP Bearer	CO				Full	1	10	100
14	UDP Bearer	CO				Full	2	10	100
15	UDP Bearer	CO				Full	3	10	100

CO / CL / WTLS / 1 bearer

Session	Bearer	Cnx. Mode	WTLS	Appl. Tests	Passive Tests	Active Tests	Refset Member	Hours	# Tests
All application tests + passive protocol tests									
1	Bearer 1	CO or CL	OFF	Full	Full if UDP		1	12	800
2	Bearer 1	Session 1	OFF	Full	Full if UDP		2	12	800
3	Bearer 1	Session 1	OFF	Full	Full if UDP		3	12	800
Auto application tests + passive protocol tests									
4	Bearer 1	! Session 1	ON	Auto	Full if UDP		1	4	600
5	Bearer 1	! Session 1	ON	Auto	Full if UDP		2	4	600
6	Bearer 1	! Session 1	ON	Auto	Full if UDP		3	4	600

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7	Bearer 1	! Session 1	OFF	Auto	Full if UDP		X	4	600

Active protocol tests

8	UDP Bearer	CO				Full	1	10	100
9	UDP Bearer	CO				Full	2	10	100
10	UDP Bearer	CO				Full	3	10	100

CO / CL / WTLS / multiple bearers

Session	Bearer	Cnx. Mode	WTLS	Appl. Tests	Passive Tests	Active Tests	Refset Member	Hours	# Tests
All application tests + passive protocol tests									
1	Bearer 1	CO or CL	OFF	Full	Full if UDP		1	12	800
2	Bearer 1	Session 1	OFF	Full	Full if UDP		2	12	800
3	Bearer 1	Session 1	OFF	Full	Full if UDP		3	12	800
Auto application tests + passive protocol tests									
4	Bearer 1	! Session 1	ON	Auto	Full if UDP		1	4	600
5	Bearer 1	! Session 1	ON	Auto	Full if UDP		2	4	600
6	Bearer 1	! Session 1	ON	Auto	Full if UDP		3	4	600
7	Bearer 1	! Session 1	OFF	Auto	Full if UDP		X	4	600
8	Bearer 2	CO	ON	Auto	Full if UDP		1	4	600
9	Bearer 2	CO	ON	Auto	Full if UDP		2	4	600
10	Bearer 2	CO	ON	Auto	Full if UDP		3	4	600
11	Bearer 2	CL	OFF	Auto	Full if UDP		1	4	600
12	Bearer 2	CL	OFF	Auto	Full if UDP		2	4	600
13	Bearer 2	CL	OFF	Auto	Full if UDP		3	4	600
14	Bearer 2	CO	OFF	Auto	Full if UDP		X	4	600
15	Bearer 2	CL	ON	Auto	Full if UDP		X	4	600

For additional bearers, repeat sessions 8 - 15

Active protocol tests

16	UDP Bearer	CO				Full	1	10	100
17	UDP Bearer	CO				Full	2	10	100
18	UDP Bearer	CO				Full	3	10	100

2 or more bearers, each one with only CL or CO implemented, but both CO and CL present in the product.

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Session	Bearer	Cnx. Mode	WTLS	Appl. Tests	Passive Tests	Active Tests	Refset Member	Hours	# Tests
All application tests + passive protocol tests									
1	Bearer X	CO or CL		Full	Full if UDP		1	12	800
2	Bearer X	Session 1		Full	Full if UDP		2	12	800
3	Bearer X	Session 1		Full	Full if UDP		3	12	800
Auto application tests + passive protocol tests									
4	Bearer X+1	CO or CL		Auto	Full if UDP		1	4	600
5	Bearer X+1	Session 4		Auto	Full if UDP		2	4	600
6	Bearer X+1	Session 4		Auto	Full if UDP		3	4	600
For additional bearers, repeat sessions 4-6									
Active protocol tests (only if CO is implemented over a UDP bearer)									
7	UDP Bearer	CO				Full	1	10	100
8	UDP Bearer	CO				Full	2	10	100
9	UDP Bearer	CO				Full	3	10	100

2 or more bearers, each one with only CL+WTLS or CO+WTLS implemented, but both CO and CL present in the product.

Session	Bearer	Cnx. Mode	WTLS	Appl. Tests	Passive Tests	Active Tests	Refset Member	Hours	# Tests
All application tests + passive protocol tests									
1	Bearer X	CO or CL	OFF	Full	Full if UDP		1	12	800
2	Bearer X	Session 1	OFF	Full	Full if UDP		2	12	800
3	Bearer X	Session 1	OFF	Full	Full if UDP		3	12	800
Auto application tests + passive protocol tests									
4	Bearer X+1	CO or CL	ON	Auto	Full if UDP		1	4	600
5	Bearer X+1	Session 4	ON	Auto	Full if UDP		2	4	600
6	Bearer X+1	Session 4	ON	Auto	Full if UDP		3	4	600
7	Bearer X+1	Session 4	OFF	Auto	Full if UDP		3	4	600
For additional bearers, repeat sessions 4-7									
Active protocol tests (only if CO is implemented over a UDP bearer)									
8	UDP Bearer	CO				Full	1	10	100
9	UDP Bearer	CO				Full	2	10	100
10	UDP Bearer	CO				Full	3	10	100

Note! The above examples illustrate examples where 3 REFSET members have been chosen for the certification test campaign.Similar considerations apply to additional REFSET members beyond 3.

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