VoiceXML Forum
Certification Policy

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Copyright Notice

Editor:

Steve Higgins (The NCC Group) mailto:steve@nccglobal.com

Revision History

Revision	Date	Comments
1.0	2003-09-30	Issued for launch of Certification program

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1 Overview

1.1 Introduction and Scope

This document defines the policies that govern the operation of the VoiceXML Forum certification program and define what can be certified and what it means to be certified. It also defines the approach, including policies and procedures, which the VoiceXML Forum uses in testing of software implementations for conformance to its implementation specifications.

The certification program is a voluntary program for VoiceXML Forum members and non-members.

The primary purpose of the testing program is to permit vendors and users to take advantage of the VoiceXML Forum standards by providing a process whereby conformance and interoperability can be tested. A VoiceXML Forum compliant platform is one that meets the conformance requirements and has been certified as compliant through the VoiceXML Forum certification program. This policy covers VoiceXML Forum certification and will be applied with appropriate modifications to future programs based on different releases of the VoiceXML specification and associated specifications.

When compliance has been confirmed, participants who agree to the terms of the trademark license which accompanies this program may affix the "VoiceXML certified" mark to their products. In order to protect the value of the "VoiceXML certified" trademark, execution of a trademark license agreement, and compliance with its terms, is mandatory for organizations that wish to relate the mark with their product in any way. It is the intention to provide incentives for potential customers to preferentially purchase such products. Buyers intending to procure compliant products will also find this document useful for understanding what they may expect from a compliant product.

1.2   Definitions

Definition	Description
Applicant	An organization that submits a platform for compliance testing.
Certification Agreement	The agreement between the Applicant and the VoiceXML Forum, which contains the legal commitment by the applicant to the conditions of the certification program.
Compliance Register	A web-based record of all certified products, which is maintained by the VoiceXML Forum
Compliant Product	An implementation that has successfully completed the compliance process as notified by VoiceXML.
Conformance Requirements	A definition of the mandatory and optional behavior a product must implement in order to be considered conformant.
Conformance Testing	Conformance testing is defined by ISO 9646 as: *Testing the extent to which an Implementation Under Test (IUT) is a conforming implementation.*
Implementation Conformance Statement (ICS)	A statement made by the supplier of an implementation or system claimed to conform to a given specification, stating which capabilities have been implemented, including which optional features are supported.
Interoperability Testing	Testing the ability of systems to provide services to and accept services from other systems and to use the services so exchanged to enable them to operate effectively together.
Problem Report	A question of clarification, intent or correctness of the specification(s), test suites or certification program.
Registration Form	A form completed by the applicant to register a particular implementation for the certification program.
Test Suite	The testware authorized by the VoiceXML Forum for use in testing within the VoiceXML certification program.
VoiceXML Forum Conformance Committee	A committee within the VoiceXML Forum responsible for the certification program.

1.3   References

1.3.1   Normative References

[1] VoiceXML Certification and License Agreement
     Posted on reflector: 2003-06-16

[2] VoiceXML Conformance Testing Laboratory Agreement
     Posted on reflector: 2003-06-16

[3] Voice Extensible Markup Language (VoiceXML) Version 2.0
     W3C Candidate Recommendation 20 February 2003
     http://www.w3.org/TR/2003/CR-voicexml20-20030220/

1.3.2   Informative References

None.

2 Compliance Policies

2.1 Award of compliance

The test process determines if an implementation is conformant to a particular version of the VoiceXML specification. There are two possible results of participating in the certification program:

1. The implementation fails to pass conformance testing. In this case it can be asserted that the implementation fails to meet the conformance requirements of the relevant VoiceXML specification.

2. The implementation passes the conformance test suite. In this case all that can be asserted is that the implementation is conformant to that particular version of the VoiceXML Forum Test Suite.

A product will be deemed "VoiceXML Certified" if it meets the compliance criteria as evaluated by an accredited 3rd party test laboratory. A product will define in an Implementation Conformance Statement(ICS) the optional and platform-specific features it supports. Once the 3rd party test laboratory is satisfied that the Applicant's implementation meets the applicable Conformance Requirements and all other requirements for compliance have been met, the VoiceXML Forum will issue notice to the Applicant that the Applicant's product is compliant and enter the product's details in the Compliance Register.

The compliance criteria for passing the conformance test suite to be evaluated by the 3rd party test laboratory are defined as follows:
•   Implementation passes all Mandatory test cases.
•   Implementation passes all Optional or platform-specific test cases when the feature is claimed in the Implementation conformance statement.

Note:
•   A single Fail verdict for any test means that the test session is failed and the implementation in non-conformant.
•   Fail verdicts associated with an accepted Test Suite Deficiencies (TSD) will not be considered as a non-conformity.

Compliance will initially consist of conformance testing of implementations based on the VoiceXML specification[3]. It is the intention to enhance the certification program in a phased approach to incorporate Interoperability Testing of devices conformant to the VoiceXML specification and to expand the compliance criteria to additional specifications defined in the W3C Speech Interface Framework.

2.2 VoiceXML Certified trademark

The "VoiceXML Certified" trademark may be applied to products that meet the VoiceXML conformance requirements, once the 3rd party test Laboratory has provided notice that certification has been achieved. The "VoiceXML Certified" trademark may only be used on or in relation to compliant products. It may not be used with products that have not completed the compliance process, or that have been withdrawn from the compliance process. A successful applicant will be required to sign the VoiceXML Certification and License Agreement[1] for each of their products.

The certification program will use a separate label to indicate with which release of the VoiceXML specification(s) a VoiceXML platform is compliant. For example, there may be certification programs for Release 2.0, 2.x, 2.x.y of the VoiceXML specification[3]. Products must meet the compliance criteria for each version of the certification program.

The awarding of the "VoiceXML Certified" trademark is not an endorsement of any product.

To maintain the integrity of the VoiceXML Forum, the VoiceXML Forum may:
•   Audit declared information for an implementation.

- Perform surveillance testing to verify that the release for which certification is being claimed is the release being tested.

2.3 Removal of VoiceXML compliance

If a product ceases to be a compliant product, any and all rights the vendor has to use the "VoiceXML Certified" trademark on or in relation to that product as defined in the terms and conditions of the VoiceXML Certification and License Agreement[1] cease immediately.

If a Compliant Product is found by any means to be no longer conformant with the VoiceXML specifications, the VoiceXML Forum will notify the supplier who shall do one of the following:
- Within 30 days rectify the non-conformity and satisfy the VoiceXML Forum of the integrity of the rectification.
- Within 30 days cease use of the "VoiceXML Certified" trademarks for the Compliant Product.
- Within 30 days satisfy the VoiceXML Forum that there is no non-conformity in the Compliant Product.
- Within 10 days invoke the appeals process as described in section 5.2 of this document

2.4 Fees and Costs

The VoiceXML Forum will charge a fee for every certification application. The fee will cover the administration costs of certification and the costs associated with formal 3rd party testing of the product.

Note(s):
- This provides a single point of contact provided by the VoiceXML Forum when applying for certification.
- The VoiceXML Forum define fee levels to encourage applicants to become members of the VoiceXML Forum.

2.5 Compliance Register

The VoiceXML Compliance Register is a web-accessible public record of all compliant products and is maintained by the VoiceXML Forum. The register contains the name of the supplier, name and version of the product, and the version of the specification for which the product is compliant. This information will be taken from the Implementation Conformance Statement and must uniquely identify the product and version under test.

Note(s):
- Additional product information (e.g. hardware/software/telephony specifics) may be included at the discretion of the VoiceXML Forum. Permission will be sought by the VoiceXML Forum from the Applicant before any information is disclosed in the Compliance Register.
- A high level overview of Optional and Platform-specific features supported and tested for an implementation may be included in the compliance register.
- The policies for altering the implementation's details on the compliance register are detailed in section 6.2.
- The certification register will contain a disclaimer for the products listed on the compliance register.

A vendor SHOULD inform the VoiceXML Forum immediately if a product listed on the Compliance Register is to be removed (for example if the product is no longer commerically available or obsolete).

2.6 Press Releases

On successful completion of the compliance process, an Applicant may issue a press release for their product. Companies are required to send their announcement to the VoiceXML Forum Marketing Committee (Marcomm) for review. The VoiceXML Forum Marketing Committee will return the press release with comments and edits to the company within 2 business days from when press release was received.

It is the responsibility of the Marketing Committee (Marcomm) to review each press release using the following criteria:

- The press release will be reviewed to ensure that it does not contain untruths pertaining to the activities of the certification program or functionality of the product or member company.
- The press release will be reviewed for accuracy of any statements and copyrights pertaining to the VoiceXML Forum.
- The press release will be reviewed to ensure that it references only the submitter's company and product and does NOT add or use comparisons to other participants or products that were involved in the compliance process.

The VoiceXML Forum may provide an executive quote to any company who wishes to include a VoiceXML Forum quote in their announcement.

The VoiceXML Forum Marketing Committee may issue a detailed set of guidelines and Press Release template to be used for each compliant product.

3 3rd Party Test Laboratory Policies

3.1 Accreditation of 3rd party test laboratory

The VoiceXML Forum has contracted the following 3rd party test laboratories to conduct compliance testing on behalf of the VoiceXML Forum:

North America	
Test Laboratory Contact Name	Chris Bajorek
Test Laboratory Company Name	CT Labs
Company Address	One Sierragate Suite A225 Roseville, CA 95678 USA
Telephone	+1 916.784.7870
Fax	+1 916.784.7781

An applicant will be designated the 3rd party test laboratory they MUST use for compliance testing during the application process.

Note(s):
- For formal compliance testing, applicants will be designated a 3rd party test laboratory based upon geographical location.
- For informal pre-testing, there is no restriction imposed.
- For applicants outside the designated geographical regions, consideration will be given to the applicants preferred option.

The VoiceXML Forum will harmonize 3rd party test laboratories by comparing test results from a control implementation.

3.2 3rd party agreement

The VoiceXML Forum implements a VoiceXML Conformance Testing Laboratory Agreement[2] with each 3rd party test laboratory detailing the tasks to be performed. This details the terms and conditions for accreditation, termination, covenants, agreements, warranties and the scope of the services.

Organizations that request recognition as a 3rd party test laboratory shall be required to follow one of the following standards for accreditation:

- ISO/IEC DIS 17025: General requirements for the Competence of Testing and Calibration Laboratories.
- ISO Guide 25: Quality and Accreditation Standards and Guides.
- EN 45001: General criteria for the operation of testing laboratories.

4 Test Suite Policies

In the VoiceXML Forum certification program, test suites are made available both for pre-compliance testing and formal testing for compliance. This section defines the types of test suite releases available and documents the process for reviewing and formally accepting new test suites for use in the program.

Test suites may be developed by any of:
*   VoiceXML Forum Conformance Committee
*   VoiceXML Forum members
*   Accredited 3rd party test laboratories
*   Contractors to the VoiceXML Forum

Test suites must be submitted to the VoiceXML Forum Conformance Committee for review and (potential) adoption for the certification program.

4.1   Test Suite Availability

Access to development releases is by download from the VoiceXML web site or over the Internet on a system hosted by the VoiceXML Forum. Test Suites are provided in electronic form and are made available along with full documentation of the VoiceXML Forum certification program. The VoiceXML Forum MAY make a charge for access to the Test Suites.

4.2   Development Test Suite

Development releases are used for pre-compliance testing by a VoiceXML Forum member to ensure a product meets the conformance requirements and is ready to enter the compliance process.

Development releases may not be identical in coverage or functionality to formal test suites, and may use a different data set.

Development releases may not be used for formal testing for compliance.

4.3   Compliance Test Suite

A compliance test suite is a release that has been approved by the VoiceXML Forum as suitable for formal testing. The VoiceXML Forum maintains a list on its web site of the current version(s) of each test suite valid for use in formal testing.

An accredited 3rd party test laboratory performs Formal testing using the latest approved compliance test suite.

From time to time, VoiceXML Forum approves new certification releases for use in the program. The VoiceXML Forum may introduce new test suites as replacements for existing test suites or as part of a continuing policy of extending test suite coverage and rectifying Test Suite deficiencies.

All new releases of a test suite undergo a sanity testing process. Any faults identified during the sanity test are rectified prior to submitting the new release to VoiceXML Forum's test suite approval process.

The VoiceXML Forum approves all new releases for use in the program.

4.4   Maintenance Test Suite

Test suite maintenance is conducted when the problem reporting process identifies a defect / issue in the test suite which requires the test suite to be modified. A new release of an approved compliance test suite addressing accepted defects is issued on a periodic basis by the VoiceXML Forum as required. Maintenance

releases undergo a sanity testing period and upon acceptance by the VoiceXML Forum Conformance Committee may be used for formal testing and replace existing certification releases.

In general, the VoiceXML Forum Conformance Committee maintains the test suites, however, this responsibility may be delegated by the VoiceXML Forum to a 3rd party.

4.5   Test Results

For formal testing, the 3rd party test laboratory archives all test results for an implementation. The archives are kept for 5 years to provide an audit trail.

5   Problem Reporting and clarification of specifications

The VoiceXML Forum Conformance Committee recognizes that VoiceXML Forum member companies will perform testing other than that which is conducted as part of the certification program and encourages this activity. The VoiceXML Forum Conformance Committee also recognizes that during this testing, problems with test suites or interpretation disagreements are inevitable.

5.1   Certification Testing Policy for Problem Reports

The VoiceXML Forum has a set of policies to accommodate problem reports to ensure a consistent, forward looking refinement activity. As a result, the following constraints are applied when problem reports lead to identified errors.

• Discovery of an error does not invalidate previous certifications.

• Errors attributed to the specification or the test suites are publicly noted.

• For certifications done after errors are noted:
  - All tests still get run, and then errors (previously noted) are reconciled with test results.
  - Errors in a specification will remain until the specification is changed, by the parent body of the specification, to correct them.
  - Errors in the test suite remain until a new test suite version is issued, with the errors corrected.

5.2   Appeals Process

If a vendor is dissatisfied with a decision about their product in the certification program's processes, then the decision may be contested through the Certification Program Appeal Process. If the vendor's complaint meets one of the following three situations, then the decision can be reviewed through the Appeals Process:

• The vendor disagrees with the VoiceXML Forum's resolution of a Problem Report.

• The vendor disagrees with the grounds for denying certification.

• The vendor disagrees with a formal notification to rectify non-conformance (that is, a vendor is representing a product as being "VoiceXML Certified", that no longer meets the criteria for certification).

There are two levels of appeal: *Technical Review* and *Board Review*.

Technical Review:

Identifying information is removed and VoiceXML Forum Certification Appeals committee meets formally to review the request, including hearing from the Vendor (in an anonymous manner). Experts may be invited as needed. A formal vote is taken and the decision is recorded.

Board Review:

This procedure is the same as above, but handled by the VoiceXML Forum Board of Directors, using technical input from committees, the vendor, and experts. This is the final decision.

6 Requirements for modifications of a compliance product

The conformance configuration defines all of the components of a VoiceXML processor that constitute a configuration of the implementation under test and the subsequent reference for changes to the implementation under test. The configuration as a reference substantially impacts what testing and conformance updates need to be made when there are deviations from the reference.

The reference configuration includes hardware, the environment software (such as the O/S) and the application software. The key definition for the conformance is the dividing line between application software and environment software.

6.1 Definition of VoiceXML Application Software

The VoiceXML Software includes a VoiceXML Processor, plus the following elements required to demonstrate a conforming processor:
• speech resources: automatic speech recognition (ASR), Dual-Tone Multi-Frequency (DTMF) tone detection, audio player/recorder, text-to-speech (TTS)
• telephony processors: providing interfaces to a switched or IP telephony network
• a specified character set and spoken language (likely English) will be used for conformance testing

The Processor Environment includes all other kinds of software:
• Operating System
• Device drivers
• Configuration files and data files.

Certification testing operates on the software in a given operating environment. Changes (and re-testing) derive from changes to Processor Environment and VoiceXML Software.

6.2 Re-Testing / Re-Certification of Implementations

When a product has met the compliance criteria, it is included in the Compliance Register. There is no time limit for the expiration of compliance which is based on the Product Details and Implementation Conformance Statement for the product.

When a product goes through its cycle of upgrades, fixes, marketing changes and major revisions, an Applicant may want to re-test / re-certify the product.

The policies for re-testing / re-certification are as follows:

Category	Description and requirement
Major change in software, new version of VoiceXML, or version with new VoiceXML features	Full testing and certification will be required. The Certification details will be listed as a new entry in the Compliance Register.
Maintenance Update	For a maintenance release of a product a re-certification is required. The Certification details will be listed as a new entry in the Compliance Register.
Changes in Product Details	If there are no changes in software or operating environment (e.g., change in product name), then no re-testing or re-certification is required. The Certification details in the Compliance Register will be updated as appropriate.
Reduced (Optional) Feature Version	If no major change involved, then this is treated as Maintenance Update. If the software was configurable without software changes, then no re-testing or re-certification are required. The Certification details in the Compliance Register will be updated as appropriate.
Different Platform Version	As part of applying for certification, the vendor must define which hardware

	and operating system environments are to be covered. The same run-time code in multiple platforms defines a "**binary compatible family**". For the certification program, only one representative platform need be tested. If the change request is to add a new binary compatible platform, then only an update to the certification record is needed. Otherwise testing and certification is required. It is expected that different character sets and language libraries for the same ASR and TTS engine software will be included in the binary compatible family category. The Certification details in the Compliance Register will be updated as appropriate.
Re-branded or OEM'ed Products	Compliance is not inherited between products. The new "**owner**" must be certified. The Certification details will be listed as a new entry in the Compliance Register.
All other situations	Full testing and certification are required

Re-certification / Re-Testing of a product is RECOMMENDED to provide a quality gate for VoiceXML products. It is RECOMMENDED for vendors to re-certify products every 12 months.

7 Confidentiality

Any confidentiality requirements regarding test results will be pursuant to the agreement between the 3rd Party Test Laboratory and the Applicant. This includes information related to the Implementation Conformance Statement(ICS), Problem Reports, Conformance Test Reports and Test Results.

All information relating to the Applicant and the product to be certified will be kept confidential by the 3rd Party Test Laboratory and the administrative function within the VoiceXML Forum. Information submitted to the VoiceXML Forum will be handled by the administration function within the VoiceXML Forum and will not be visible to any level of membership including the VoiceXML Forum board.