BONDI – CONFORMANCE PROCESS

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1. BONDI COMPLIANCE AND BONDI CONFORMANCE

When vendors create implementations of BONDI, they need a mechanism by which they can claim formally that they support the standard. This document describes the process by which those claims can be made.

Before addressing the specific components of the process, it's important to define what is meant by compliance and conformance in the context of BONDI. In particular, OMTP attaches specific meanings to these terms. These meanings are used to characterise the way in which implementations support BONDI.

1.1. COMPLIANCE

Within OMTP, the term compliance is used in relation to individual requirements within a document that defines some specification. In the case of BONDI, the documents that contain these requirements are those that specify the standard.

For the BONDI Interfaces specification, the individual requirements are the modules into which the API is organized. Consequently, an implementation MAY claim compliance with individual BONDI modules.

For the BONDI Architecture and Security specification, individual requirements are separately documented. An implementation MAY claim compliance with each individual requirement.

1.2. CONFORMANCE

Within OMTP, the term conformance is used in relation to complete specifications, or profiles of specifications. Profiles of specifications may exist where there is some useful subset of a complete specification that it is important to support. For an implementation to be conformant to some specification or profile, it MUST be compliant with all requirements of that specification or profile.

The BONDI profiles are described further in *BONDI Product Profiles*, on page 7.

1.3. CLAIMS

Claims made about an implementation of BONDI use the same underlying framework as is used for other OMTP specifications. This framework is provided by the OMTP Product Profile Process.

Conformance claims are made by a company, or other organisation, that has both the technical capability and the required authority to make the claim on behalf of a particular implementation. Conformance claims require the support of a set of compliance claims, each of which relates to a specific requirement from the BONDI specifications. These compliance claims are made using a BONDI-specific compliance matrix. Each matrix is specific to a particular

release of BONDI. It allows claims to be made about the compliance of an implementation to the individual requirements associated with that particular BONDI release The compliance matrix is specifically structured to assist vendors in making the appropriate claims.

The conformance of a particular implementation to a particular version of a particular profile of BONDI can be determined from the compliance matrix. If the implementation is compliant with all of the requirements that are specified for that particular profile and version of BONDI, then the implementation is conformant.

Claims of compliance and conformance are self-certified. The company, or other, organization making the claims is responsible for their veracity.

Individual compliance claims must be supported by results obtained by execution of the appropriate BONDI compliance test suite, The test suites are specific to a particular release of BONDI. These suites allow providers to test the compliance of their implementations to the individual requirements of a particular release of BONDI.

Claims of compliance and conformance are peer reviewed. All such claims are made in the public domain. This allows other members of the wider BONDI community to challenge them.

The mechanisms used for BONDI compliance build upon the existing general OMTP Product Profile process. The BONDI-specific compliance matrices and test suites are available from the BONDI portal.

Further details of the processes involved and details of the associated materials are given in *Process*, on page 11.

2. THE SCOPE OF BONDI CONFORMANCE

The process, by which claims of BONDI conformance are made, is designed to allow providers to specify the support that their implementations provide for BONDI. These claims make it possible for users of BONDI implementations and developers of BONDI content to have confidence that conformant implementations will allow their materials to execute correctly.

However, BONDI conformance alone does not imply anything about a particular implementation, other than that it complies with the appropriate set of requirements. In particular, the fact that an implementation conforms to a particular BONDI profile cannot be assumed to imply anything about the quality of that implementation. Conformant implementations might still be susceptible to security vulnerabilities, might not be robust, or might perform poorly.

Statements about the quality of implementations, and in particular their ability to withstand security attacks, are matters for the providers of the implementations. They are beyond the scope of BONDI compliance and conformance.

Similarly, the BONDI Compliance Test Suites focus on testing the correct behaviour of BONDI implementations. They do not in themselves provide any form of additional tests of quality or security of implementations. Providers of BONDI implementations should ensure that they supplement BONDI Compliance testing with extensive security and "penetration" testing.

Finally, BONDI compliance and conformance is related exclusively to implementations of the BONDI standards. It is not intended to be a mechanism for making claims about widgets and applications that are written to use BONDI APIs and security. BONDI compliance and conformance does not provide any mechanism for verifying the correctness of the form, structure function or quality of such applications and widgets.

3. BONDI PRODUCT PROFILES

BONDI currently supports three product profiles for conformance. Each profile covers one of the primary use-cases for BONDI implementations.

A particular BONDI implementation can be conformant with one or more of these profiles simultaneously.

3.1. THE WIDGET PRODUCT PROFILE

The BONDI Widget Product Profile applies to implementations that support only BONDI widgets.

3.2. THE BROWSER PRODUCT PROFILE

The BONDI Browser Product Profile applies to implementations that support only BONDI used in web applications running in a conventional browser.

3.3. THE MOBILE PRODUCT PROFILE

The BONDI Mobile Product Profile applies to implementations that support only mobile devices.

4. VERSIONING AND BONDI CONFORMANCE

BONDI conformance is tightly bound to a specific version of the relevant BONDI specifications. The BONDI Compliance Matrices and the BONDI Compliance Test Suites are specific to particular versions of BONDI.

However, the tests to be used to verify compliance are open source code. In addition, there is an active community of developers working on the tests. As such the tests will evolve rapidly in terms of both breadth and quality.

For this reason, at any point in time the compliance matrix for a particular version of BONDI SHALL implicitly reference the most recent version of the test suite, which has been approved by the BONDI Compliance Group, and that applies to that particular version of BONDI. Compliance claims MUST always be made against a strictly versioned test suite, and this version number SHALL be recorded in the submission.

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5. COMPONENTS OF A BONDI COMPLIANCE STATEMENT

There are six elements to BONDI a compliance statement:

1. Architecture and Security Requirements: self-certified statements of compliance against requirements that a BONDI user agent must support.

2. Architecture and Security Policy Language: statements of compliance against the policy language used within the Architecture and Security documentation.

3. Interface specifications: statements of compliance against each and all of the currently defined interfaces, plus generic methods at BONDI scope. These statements should be supported by test traces.

4. Interface - Device Vocabulary: statement of compliance against the device vocabulary supported by the device API.

In addition to these statements of unit compliance, a BONDI statement of compliance will include some system-wide measures to further validate compliance. That is: the compliance submitter MUST make a self-declared statement that the following examples render correctly:

5. System test widgets: a list of widgets that should render and function correctly.

6. System test policies: a list of policies that should behave correctly.

Both the example widgets and example policies are provided as part of the BONDI Compliance Test Suite [4].

6. BONDI EXTENDED COMPLIANCE SCOPE

The current BONDI specification builds upon existing and evolving W3C widget specifications. The compliance of a BONDI user agent relating to these specific component specifications shall be deferred to W3C, and the BONDI compliance statements will be made by reference to those W3C widget specifications.

Specifically this relates to:

1. Widgets 1.0: Packaging and Configuration [2]
2. Widgets 1.0: Digital Signatures [3]

7. PROCESS

The process of claiming BONDI conformance, for an implementation, consists of three steps. The first of these, self-declaration, consists of documenting claims of compliance to specific requirements. It is described in more detail in *Self-Declaration* on page 11. The second step consists of execution of the standard BONDI compliance tests, to support the compliance claims. It is described in more detail in *BONDI Compliance Tests*, on page 11. The third step, submission of materials and their acceptance by OMTP, is described in more detail in *Submission*, on page 12.

When all three steps have been successfully completed, and the associated conformance criteria for each step have been fulfilled, the implementation can claim BONDI conformance.

7.1. SELF-DECLARATION

The self-declaration step involves the vendor of a BONDI implementation making a formal statement about the extent to which the implementation is compliant to a particular version of a particular profile of BONDI. In practice, the vendor must complete a spreadsheet to declare which aspects of the BONDI specification are supported.

To complete this step, the Vendor of a BONDI implementation SHALL provide a statement of compliance against all discrete applicable requirements and/or specification sections contained in the appropriate BONDI Compliance Matrix spreadsheet, which can be downloaded from the BONDI website [1].

7.1.1. CONFORMANCE CRITERIA

To achieve BONDI conformance, an implementation must satisfy the following criteria, defined in the spreadsheet:

1. All requirements marked as Mandatory are fulfilled.

2. All requirements marked as Conditionally Mandatory are fulfilled, provided that the condition provided in the explanatory notes column is met.

3. The total set of Mandatory requirements is defined as the combined set of requirements defined in points 1 and 2 above.

The vendor SHALL document the compliance in the spreadsheet. The completed BONDI Compliance spreadsheet SHALL be made available to OMTP, in the manner defined in *Submission*, on page 12

7.2. BONDI COMPLIANCE TESTS

The BONDI compliance tests allow the vendor of a BONDI implementation to demonstrate that implementation's compliance to the BONDI specifications.

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A test is considered to have been passed successfully if all of the associated test assertions are TRUE, as a result of processing the tests.

To complete this step, the Vendor of a web runtime MUST execute all tests provided in the BONDI Compliance Test Suite [4] and evaluate the test results.

7.2.1. CONFORMANCE CRITERIA

To achieve BONDI compliance, an implementation must satisfy the following criteria:

1. Tests for all requirements marked as Mandatory are passed successfully.

2. Tests for all requirements marked as Conditionally Mandatory are passed successfully, provided that the associated condition is met.

The vendor SHALL record the results of the tests by saving the log file(s) that are created. The resulting log file(s) SHALL be made available to OMTP, in the manner defined in *Submission*, on page 12

7.3. SUBMISSION

On completion of self-declaration and successful completion of the BONDI compliance tests, the resulting materials MUST be made available to OMTP as follows:

1. The completed BONDI Compliance Matrix and test log file(s) MUST be zipped up to create a zip file of the results.

The zip file MUST be attached to an email sent to BONDIcompliance@omtp.org. The email MUST identify:

1. The vendor claiming conformance for the implementation

2. The implementation for which conformance is being claimed

3. The particular conformance being claimed, as described in BONDI Product Profiles, on page 7.

When OMTP confirms that the submission meets the appropriate criteria, the implementation can claim BONDI conformance.

8. REFERENCES

No.	Document	Author	Date
1	BONDI Compliance Matrix (versioned): http://bondi.omtp.org/1.0/compliance/BONDI_Compliance_Matrix_v1.0.xls http://bondi.omtp.org/1.1/CR/compliance/BONDI_Compliance_Matrix_v1.1.xls	OMTP	2010
2	Widgets 1.0: Packaging and Configuration http://www.w3.org/TR/2009/CR-widgets-20090723/	W3C	July 2009
3	Widgets 1.0: Digital Signatures http://www.w3.org/TR/2009/CR-widgets-digsig-20090625/	W3C	June 2009
4	BONDI Compliance Test Suite: http://tests.bondi.omtp.org/	OMTP	2009

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