FOREWORD

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- "should" and "may" expresses non-mandatory provisions
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are cautioned to check to determine that they have the latest edition of any OBSAI
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Interpretations: Occasionally questions may arise regarding the meaning of
portions of standards as they relate to specific applications. When the need for
interpretations is brought to the attention of OBSAI, the OBSAI TWG will initiate
action to prepare appropriate responses. Since OBSAI Specifications represent a
consensus of OBSAI Member's interests, it is important to ensure that any
interpretation has also received the concurrence of a balance of interests. For this
reason OBSAI and the members of its Technical Working Groups are not able to
provide an instant response to interpretation requests except in those cases
where the matter has previously received formal consideration.

Comments on specifications and requests for interpretations should be addressed
to:

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Contents

1 Summary of changes ........................................................................................................6

2 Glossary ..........................................................................................................................7
   2.1 Abbreviations .........................................................................................................7
   2.2 Definition of Terms ...............................................................................................7
   2.3 Roles .......................................................................................................................7

3 Objectives .....................................................................................................................9
   3.1 Conformance Test ...............................................................................................9
   3.2 Compliance Evaluation .......................................................................................9
   3.3 Included .................................................................................................................9
      3.3.1 Actors and services ......................................................................................9
   3.4 Excluded .................................................................................................................9
      3.4.1 Change Management ...................................................................................9
      3.4.2 Test Process ...............................................................................................10

4 Standards and Technical Specifications ...................................................................11
   4.1 OBSAI Technical Specifications ........................................................................11
   4.2 Independent Industry Specifications ..................................................................11
   4.3 Dependent Industry Specifications ....................................................................11

5 OBSAI Conformance Test Documents ....................................................................13
   5.1 Conformance Test Catalogue .............................................................................13
   5.2 OBSAI Conformance Test Specification ..........................................................13
   5.3 OBSAI Technical Specifications ........................................................................14
   5.4 RP1 Test Messages Specification ......................................................................14
   5.5 Test Requirement List .........................................................................................14
   5.6 Conformance Test Report ...................................................................................14

6 Conformance Test Types ...........................................................................................15
   6.1 Self Conformance Test .........................................................................................15
   6.2 Customer Conformance Test ...............................................................................15
   6.3 Independent Conformance Test ...........................................................................15

7 OBSAI Compliance Evaluation ................................................................................16
   7.1 Application for Compliance Evaluation ............................................................16
   7.2 Requirements for Module Modifications ............................................................16
7.2.1 Non-Impacting to Form, Fit or Function ......................................................17
7.2.2 Impacting to Form Fit or Function ...............................................................17
7.3 Publication of Results ......................................................................................17
7.4 Notification of Evaluation .............................................................................17
7.5 Labelling and Product Markings ......................................................................17
8 OBSAI Compliance Process .............................................................................18
9 References .........................................................................................................21
# 1 Summary of changes

<table>
<thead>
<tr>
<th>Version</th>
<th>Approved by</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.00</td>
<td>First approved revision</td>
<td>25th May 2005</td>
</tr>
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</table>
2 Glossary

2.1 Abbreviations

For the purposes of the present document, the following abbreviations apply:

<table>
<thead>
<tr>
<th>ABBREVIATION</th>
<th>DESIGNATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>3GPP</td>
<td>3rd Generation Partnership Project</td>
</tr>
<tr>
<td>IEEE</td>
<td>Institute of Electrical and Electronic Engineers</td>
</tr>
<tr>
<td>OEM</td>
<td>Original Equipment Manufacturer</td>
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2.2 Definition of Terms

For the purposes of the present document, the following terms and definitions apply:

Compliance: accordance to OBSAI technical specifications

Conformance Test: verification activity that is to demonstrate how well an OBSAI module complies with the OBSAI Technical Specifications.

2.3 Roles

Customer: Person or organization who places an order or a presumptive order for an OBSAI module. The customer is responsible for the superior product and thereby responsible for the sourced OBSAI module as far as the end user is concerned.

Manufacturer: Supplier/designer of an OBSAI module. The manufacturer is the owner of the OBSAI compliant module and thereby responsible for achieving and maintaining OBSAI compliance. The manufacturer is responsible for all in-sourced OBSAI components. Responsibility towards the end user is regulated by business agreements between the manufacturer and the customer.

OBSAI Management Board: Is the authority that bestows approval for a module to be deemed OBSAI compliant; approval is based on the conformance test results. The technical aspects of the OBSAI compliance approval will be delegated to a technical forum consisting of the owners of the OBSAI Test Specifications.

The OBSAI management board is in control of the OBSAI Test Specifications.
Test House: general term for any test lab able to perform Conformance Testing – in-house or external.

Component Supplier: Supplier of components, for example a chipset, to an OBSAI module manufacturer. The manufacturer of an OBSAI module may request the Component Supplier to demonstrate compliance to the OBSAI specifications or a reference design with appropriate interfaces so that OBSAI compliance can be verified.
3 Objectives

The objective of this document is to describe the procedures required in order to receive OBSAI compliance approval for a module. The document handles two main areas; Conformance Test and Compliance Evaluation. Supporting documents provided by OBSAI required in the compliance process are also described in this document.

3.1 Conformance Test

The objective of the Conformance Testing is to ensure that the OBSAI module under test fulfills all relevant requirements defined in the OBSAI technical specifications. Compliance to the OBSAI Technical Specifications, demonstrated by means of the defined Conformance Test, enables inter-working between OBSAI modules from different vendors.

3.2 Compliance Evaluation

The objective of the Compliance Evaluation is to ensure that manufacturers requesting OBSAI compliance for their modules will be subjected to a unified assessment process. The Compliance Evaluation process will also provide customers with information about available OBSAI compliant modules.

3.3 Included

3.3.1 Actors and services

This document describes the services available from the OBSAI organisation and the interactions needed between the involved parties during the process of achieving OBSAI compliance and approval of that compliance.

3.4 Excluded

3.4.1 Change Management

The change management process regulating revision handling of the compliance artefacts is not described in this document. It may be found instead in the directives for OBSAI Maintenance Mode [ref 1]. Compliance artefacts that are to be regulated by this process are for instance, Conformance Test Specifications, Test Messages and the Conformance Test Catalogue.
3.4.2 Test Process

Details regarding the processes and procedures to be used when performing the actual Conformance Tests are not described in this document, that information is found in the Conformance Test Specifications.
4 Standards and Technical Specifications

OBSAI references three types of technical specifications, OBSAI Technical Specifications, Independent Industry Specifications and Dependent Industry Specifications.

It is not the intent of OBSAI Conformance Testing to validate that a product conforms to other industry standards, it is rather to ensure that products are designed to be consistent with OBSAI Technical Specifications.

OBSAI Conformance Testing is undertaken by default with the latest approved revision of the OBSAI specifications.

4.1 OBSAI Technical Specifications

The OBSAI Technical Specifications define the OBSAI modules and interfaces regulated by the OBSAI organisation.

The OBSAI Technical Specifications contain a set of corresponding Conformance Test Specifications. For each type of OBSAI module the range of test cases that are to be passed is defined by the Conformance Test Catalogue.

4.2 Independent Industry Specifications

Independent Industry Specifications are specifications where compliance is regulated by other industry bodies. At no time does testing of an OBSAI module necessarily require or ensure compliance to third party specifications.

An example of such a specification is that of the air interface requirements of, for example, the 3GPP2 TIA/EIA/IS-2000 specifications or the 3GPP Series 04.xxx, 05.xxx Specifications. OBSAI does not specifically address testing of the air interface nor does it ensure compliance to air interface specifications. Compliance to these specifications is the responsibility of the manufacturer and is not governed by OBSAI.

4.3 Dependent Industry Specifications

Dependent Industry Specifications are specifications that although not specifically tested within the scope of OBSAI are integral to the testing of OBSAI interfaces and are inherently tested during OBSAI Conformance Testing.
Examples of such specifications are IEEE 802.3 and IEEE 802.1. In these cases OBSAI Conformance Test requirements may identify expectations that such interfaces are tested according to relevant industry standards and may make reference to these standards. It is expected that a manufacturer of an OBSAI module ensures that such interfaces comply with the relevant industry standard.

OBSAI may request evidence of compliance to dependant industry standards or request additional testing to be completed on parts of the interface that references a dependant industry standard or standards.
5 OBSAI Conformance Test
Documents

All Conformance Test related documents that are under the custody of OBSAI are under the control of the OBSAI change management guidelines described in the OBSAI Maintenance Mode procedure [ref 1].

The OBSAI Conformance Test related documents can be downloaded from the OBSAI web site.

5.1 Conformance Test Catalogue

The Conformance Test Catalogue provides a list of applicable Conformance Test Cases that are required in order to verify compliance of an OBSAI module or an interface on the module.

The Conformance Test Catalogue outlines all OBSAI Conformance Test Specification appendices and their revision status, upon which the Conformance Test Catalogue is based. The Conformance Test Catalogue will be updated when new revisions of the conformance test cases are released.

Manufacturers will use the Conformance Test Catalogue to identify specific test cases required to determine the compliance requirements for the module under test.

5.2 OBSAI Conformance Test Specification

The OBSAI Conformance Test Specification outlines the generic aspects of OBSAI conformance testing. Detailed test requirements and test methods are defined in the test cases that are appendices of the OBSAI Conformance Test Specification.

The test cases also provide a reference to a method that should be applied for compliance. These methods may include OBSAI defined test methods or industry standard test methods.

Test cases that are revised for other reasons than editorial reasons will replace the previous revision and a new test case number will be assigned to the test case.

Conformance Test Specification appendices will keep references to the Technical Specifications they are based upon. The information will also include the revision number(s) of the relevant Technical Specification(s).
5.3 OBSAI Technical Specifications

See list of latest approved technical specifications on the OBSAI website (www.obsai.org).

5.4 RP1 Test Messages Specification

The RP1 Test Message Specification [ref 2] describes a test control extension to the RP1 interface. Test messages are SOAP messages, which are used in triggering the specific test behaviour needed in executing the OBSAI conformance test cases. A module vendor shall implement the extension in order to conform to the OBSAI Specifications.

5.5 Test Requirement List

The Test Requirements List is the list of all required conformance test cases applicable to the module to be verified. The Test Requirement List is generated by selecting all test cases in the Conformance Test Catalogue required for the module to be verified. Once a complete list of tests is identified from the Conformance Test Catalogue, the specific test methods can be retrieved from the referenced test specification document.

5.6 Conformance Test Report

The Conformance Test Report will serve two main purposes, firstly to document the Conformance Test results and secondly to serve as the application for OBSAI Compliance Evaluation.

The Conformance Test Report will include formal information such as product information and test house information together with details about each test performed (for example: test results, parametric information, test set-ups and the name of the responsible tester).

For in-sourced OBSAI compliant components, applicable test results and test set-ups from the component vendor should be included in the Conformance Test Report.

The Conformance Test Report and applicable enclosures is the only information that is required in a submission for an OBSAI Compliance Evaluation.
6 Conformance Test Types

There are three main types of Conformance Tests valid to demonstrate OBSAI compliance, Self Conformance Test, Customer Conformance Test and Independent Conformance Test; these are described in more detail below.

OBSAI do also support the possibility to use a mixture of the conformance test types to complete the Conformance Test.

Irrespective of the Conformance Test Type, requirements on the performed tests are the same, as well as the required documentation for compliance evaluation. Results from Conformance Testing are required to clearly demonstrate that a module is compliant to a defined set of OBSAI Technical Specifications by using the Conformance Test Specifications identified by the Conformance Test Catalogue.

6.1 Self Conformance Test

Self Conformance Testing is a process where the manufacturer of an OBSAI module performs the required tests outlined in the Test Requirement List. With this type of qualification there is no third party or independent verification.

There may be aspects of OBSAI compliance that it is not feasible to demonstrate at a module level. In such case it is rather a matter for the component provider to supply the manufacturer with the information that the component complies to the OBSAI standards. Another possibility is that the component supplier provides a public reference design with appropriate interfaces to enable execution of the tests at a module level.

6.2 Customer Conformance Test

Customer Conformance Testing requires an OEM or customer to perform the Conformance Tests of an OBSAI module, as defined by the Test Requirement List.

6.3 Independent Conformance Test

An Independent Conformance Test requires an independent body, for example a third-party Test House, to perform conformance testing according to the OBSAI requirements and Conformance Test Specifications.
7 OBSAI Compliance Evaluation

The OBSAI Management Board is the forum that has the authority to approve compliance for an OBSAI module.

Technical parts of the OBSAI Compliance Evaluation may be delegated to a technical forum consisting of the owners of the concerned Conformance Test Specifications.

7.1 Application for Compliance Evaluation

A request for OBSAI Compliance Evaluation can be made by any company developing OBSAI modules.

A submission for an OBSAI Compliance Evaluation is performed by sending the completed Conformance Test Report and applicable supplementary information to:

webmaster@obsai.org.

When OBSAI has received the submission, an acknowledgement will be sent to the submitter including information about when the results from the evaluation will be available.

7.2 Requirements for Module Modifications

Periodically products will undergo revision due to cost reductions, process improvements or product changes. It is the manufacturer that is responsible for maintaining OBSAI compliance when an OBSAI compliant approved module is revised. That implies that it is the manufacturer that decides if a re-evaluation is required.

The customer may on occasion request the re-evaluation of an approved module which has been revised.

Manufacturers of OBSAI modules are required to have product revision control and individual (serial number) tracking of their products; such product information should be visible on the product and able to be retrieved from its software. The manufacturer is required to keep information about changes made through product revisions.
In the event of design changes or process improvements the following rules shall apply.

7.2.1 Non-Impacting to Form, Fit or Function

If a change is made that does not impact the form fit or function of the product, no re-test is required. The manufacturer shall maintain a traceable record of all such changes and shall re-test the product and maintain a record of the re-test internally for review upon request.

If a product fails the internal re-test, the change shall be treated as impacting to form fit or function and a new Conformance Test Report shall be submitted to OBSAI.

7.2.2 Impacting to Form Fit or Function

If a change is to form, fit or function, the manufacturer shall re-test the product and re-submit the results for registration.

7.3 Publication of Results

OBSAI will publish a list OBSAI approved modules on the OBSAI website, the information will be available to the public. The published information will show module type, module name, software and hardware revision and company information.

Information about modules that have not been approved through the Compliance Evaluation process will not be published.

7.4 Notification of Evaluation

The OBSAI Management Board will notify the manufacturer about the results from the Compliance Evaluation process, irrespective of the evaluation results.

If a submission is declined, a reason will be provided and the manufacturer will be required to complete a new submission.

A decision from the OBSAI Management Board is to be regarded as a final decision.

7.5 Labelling and Product Markings

Compliant modules will be entitled to display the OBSAI logo on the approved product or promotional material.
The following process describes on a high level the procedures required to achieve approval for OBSAI compliance.

**8 OBSAI Compliance Process**

Make a Test Requirement List from the Conformance Test Catalogue, include all test cases specified for the designated module.

With use of the Test Requirement List, retrieve all the detailed Test Requirements and Test Methods (appendices to Conformance Test Specification).

**Input**
- Conformance Test Catalogue
- OBSAI Technical Specifications
- Dependent Technical Specifications
- Independent Technical Specifications
- Conformance Test Specification (including appendices)
- Module to be verified

**Output**
- Test Requirement List
- Detailed Test Requirements and Test methods (appendices to Conformance Test Specifications)

Decide on Conformance Test Types for different test areas (interfaces, groups of test cases or individual test cases):
- Self Conformance Test
- Customer Conformance Test
- Independent Conformance Test

**Input**
- Test Requirement List
- Detailed Test Requirements and Test methods (appendices to Conformance Test Specification)

**Output**
- Test areas delegated to the different test types
Execute delegated Test Cases according to Test Requirement List, Detailed Test Requirements and Test Methods.

**Input:**
- Module to be verified
- Test Requirement List
- Test Specifications

**Output:**
- Conformance Test Results including parametric settings, test set-ups and log files

---

Complete the Conformance Test Report, use template available on OBSAI web. Include required supplementary information.

**Input:**
- Test Requirement List
- Conformance test results
- Parametric settings
- Test set-up information
- Applicable log files

**Output:**
- Conformance Test Report

---

Send Conformance Test Report for OBSAI Compliance Evaluation.

Send submission to webmaster@obsai.org.

**Input:**
- Conformance Test Report

**Output:**
- Submission sent for evaluation.
Receive submission for OBSAI Compliance Evaluation.

**Input**
- Conformance Test Report

**Output**
- Acknowledgement sent to manufacturer including a tentative ready date
- Technical part of the submission delegated to the technical forum

Evaluate OBSAI Compliance

**Input**
- Conformance Test Report
  - Publicly available:
  - Test Specifications
  - Technical Specifications
  - Dependant Technical Specifications
  - Independent Technical Specification

**Output**
- Recommendation on a verdict to Management Board

Evaluate submission from a formal view.
Decide on approval of OBSAI Compliance with use of the recommendation given from the technical forum.
At approval publish results on OBSAI web.
If submission is declined, request for new submission from manufacturer.

**Input**
- Recommendation on a verdict received from the technical forum
- Conformance Test Report

**Output**
- Verdict communicated to manufacturer
- Product and company information published on the OBSAI web.
9 References

[ref. 1] Open Base Station Architecture Initiative, Maintenance Mode

[ref. 2] OBSAI RP1 Test Messages Specification v 1.0