Phone Alert Status Profile (PASP)

Bluetooth® Test Suite

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- **Revision Date:** 2020-01-08
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1 Scope

This Bluetooth document contains the Test Suite Structure (TSS) and Test Cases (TC) to test the Bluetooth Phone Alert Status Profile Specification.

The objective of this test suite is to provide a basis for interoperability for Bluetooth devices giving a high probability of air interface interoperability between different manufacturers' Bluetooth devices.
## 2 References, Definitions, and Abbreviations

### 2.1 References

This Bluetooth document incorporates, by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter.

[1] Test Strategy and Terminology Overview
[2] Bluetooth Core Specification, v4.0 or later
[3] ICS Proforma for Phone Alert Status Profile, PASP.ICS
[4] Phone Alert Status Profile Specification 1.0
[5] GAP Test Suite, GAP.TS
[6] GATT Test Suite, GATT.TS
[7] Phone Alert Status Service Specification 1.0
[8] Phone Alert Status Service Test Suite, PASS.TS

### 2.2 Definitions

For the purpose of this Bluetooth document, the definitions in [1] and [2] apply.

### 2.3 Abbreviations

For the purpose of this Bluetooth document, the abbreviations in [1] and [2] apply.
3 Test Suite Structure (TSS)

3.1 Overview

The Phone Alert Status Profile is a client of the Generic Attribute Profile (GATT). This is illustrated in Figure 3.1.

![Diagram](image)

Figure 3.1: Phone Alert Status Profile Test Model

3.2 Test Strategy

The test objectives are to verify functionality of the Phone Alert Status Profile and enable interoperability between different devices. The testing approach is to cover mandatory and optional requirements in the Profile specification and to match these to the support of the IUT as described in the ICS Proforma.

The basis for the test approach is the general concepts and conformance testing principles defined in ISO/IEC 9646-1 and ISO/IEC 9646-2; both are part of the OSI Conformance Testing Methodology and Framework (CTMF).

The conformance test equipment shall provide an implementation of the Radio Controller and the parts of the Host needed to perform the test cases defined in the Phone Alert Status Profile Test Suite. For some test cases, it is necessary to stimulate the IUT from an Upper Tester. In practice, this could be implemented as a special test interface, an MMI, or another interface supported by the IUT.
The following configuration is recommended for testing Phone Alert Status client IUT:

![Diagram of test configuration](image)

*Figure 3.2: Phone Alert Status Profile Client Test Configuration*

The Phone Alert Status Profile test suite contains Valid Behavior (BV) tests complemented with Invalid Behavior (BI) tests where required. The test coverage mirrored in the test suite structure is the result of a process that started with catalogued specification requirements that were logically grouped and assessed for testability enabling coverage in defined test cases.

The test suite structure is a tree with the first level representing the protocol groups as listed in section 3.3.

### 3.3 Test Groups

The following test groups have been defined.

#### 3.3.1 Discovery of Services and Characteristics and Descriptors
This group tests IUT discover of the Phone Alert Status Service and Characteristics and Descriptors and. Where applicable these tests are included by reference from [8].

#### 3.3.2 Configuration Features
This group tests IUT implementation of the Phone Alert Status Profile Read and Write Features.

#### 3.3.3 Read Features
This group tests IUT implementation of the Phone Alert Status Profile Read Features.

#### 3.3.4 Write Features
This group tests IUT implementation of the Phone Alert Status Profile Write Features.

#### 3.3.5 Notify Features
This group tests IUT implementation of the Phone Alert Status Profile Notify Features.
4 Test Cases (TC)

4.1 Introduction

4.1.1 Test Case Identification Conventions

Test cases shall be assigned unique identifiers per the conventions in [1]. The convention used here is `<spec abbreviation>/<IUT role>/<class>/<feat>/<func>/<subfunc>/<cap>/<xx>-<nn>-<y>`.

Bolded ID parts shall appear in the order prescribed. Non-bolded ID parts (if applicable) shall appear between the bolded parts. The order of the non-bolded parts may vary from test suite to test suite, but shall be consistent within each individual test suite.

<table>
<thead>
<tr>
<th>Identifier Abbreviation</th>
<th>Spec Identifier <code>&lt;spec abbreviation&gt;</code></th>
</tr>
</thead>
<tbody>
<tr>
<td>PASP</td>
<td>Phone Alert Status Profile</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Identifier Abbreviation</th>
<th>Role Identifier <code>&lt;IUT role&gt;</code></th>
</tr>
</thead>
<tbody>
<tr>
<td>CL</td>
<td>Phone Alert Status Profile Client</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Identifier Abbreviation</th>
<th>Feature Identifier <code>&lt;feat&gt;</code></th>
</tr>
</thead>
<tbody>
<tr>
<td>PPCB</td>
<td>Phone Alert Status Profile Client Behavior</td>
</tr>
<tr>
<td>PPCF</td>
<td>Phone Alert Status Profile Configure Features</td>
</tr>
<tr>
<td>PPD</td>
<td>Phone Alert Status Profile Discovery of Services and Characteristics and Descriptors</td>
</tr>
<tr>
<td>PPNF</td>
<td>Phone Alert Status Profile Notify Features</td>
</tr>
<tr>
<td>PPRF</td>
<td>Phone Alert Status Profile Read Features</td>
</tr>
<tr>
<td>PPWF</td>
<td>Phone Alert Status Profile Write Features</td>
</tr>
<tr>
<td>TPCN</td>
<td>Profile Connection</td>
</tr>
</tbody>
</table>

Table 4.1: Phone Alert Status Profile TC Class Naming Convention

4.1.2 Conformance

When conformance is claimed, all capabilities indicated as mandatory for this Specification shall be supported in the specified manner (process-mandatory). This also applies for all optional and conditional capabilities for which support is indicated. All mandatory capabilities, and optional and conditional capabilities for which support is indicated are subject to verification as part of the Bluetooth Qualification Program.

The Bluetooth Qualification Program may employ tests to verify implementation robustness. The level of implementation robustness that is verified varies from one Specification to another and may be revised for cause based on interoperability issues found in the market.
Such tests may verify:

- that claimed capabilities may be used in any order and any number of repetitions that are not excluded by the Specification, OR

- that capabilities enabled by the implementations are sustained over durations expected by the use case, OR

- that the implementation gracefully handles any quantity of data expected by the use case, OR

- that the implementation gracefully rejects any attempt to exercise capabilities which were declared as not supported. Graceful rejection means that the implementation demonstrates uninterrupted conformance to the specification immediately after rejecting such attempts without any need to be externally reset or adjusted, OR

- that in cases where more than one valid interpretation of the Specification exists, the implementation complies with at least one interpretation and gracefully handles other interpretations, OR

- that the implementation is immune to attempted security exploits.

A single execution of each of the required tests is required in order to constitute a pass verdict. However, it is noted that in order to provide a foundation for interoperability, it is necessary that a qualified implementation consistently and repeatedly pass any of the applicable tests.

In any case, where a member finds an issue with the Test Plan Generator, the test case as described in the test suite, or with the test system utilized, the member is required to notify the responsible party via an errata request such that the issue may be addressed.

### 4.1.3 Pass/Fail Verdict Conventions

Each test case has an Expected Outcome section, which outlines all the detailed pass criteria conditions that shall be met by the IUT to merit a Pass Verdict.

The convention in this test suite is that, unless there are a specific set of fail conditions outlined in the test case, the IUT fails the test case as soon as one of the pass criteria conditions cannot be met. If this occurs, the outcome of the test shall be the Fail Verdict.

### 4.2 Setup Preambles

#### 4.2.1 Set up LE Transport

Use GATT.TS [6] Preamble [Set up ATT Bearer over LE].

### 4.3 Discover Services and Characteristics and Descriptors

The test group objective is to verify Phone Alert Status Profile Discovery of Services and Characteristics.

The procedures defined in this test group verify IUT discovery of the Services defined in the Phone Alert Status Service Specification [7] by a Phone Alert Status Server IUT, by a Phone Alert Status Client IUT.

#### 4.3.1 PASP/CL/PPD/BV-01-I [Discover Phone Alert Status Service]

- **Test Purpose**
  
  Verify that the Phone Alert Status Service can be detected by the Phone Alert Status Client IUT.
• Reference

[4] 4.1

• Initial Condition

Establish an ATT Bearer connection between the Lower Tester and IUT; see 4.2.

The Lower Tester includes at least one instantiation of the Phone Alert Status Service [7].

• Test Procedure

The Upper Tester issues a command to the IUT to discover primary services. There are two alternatives:

1. Execute the procedure included in GATT.TS [6] Discover All Primary Services, GATT/CL/GAD/BV-01-C, once, with the database specified in [7].

2. Execute the procedure included in GATT.TS [6] Discover Primary Services by Service UUID, GATT/CL/GAD/BV-02-C, with the service UUID set to «Phone Alert Status Service», with the database specified in [7].
• Expected Outcome
  Pass verdict

  At least one attribute handle range is returned, containing the starting handle and the ending handle of each instantiation of a Phone Alert Status Service definition.

4.3.2 PASP/CL/PPD/BV-02-I [Discover Alert Status Characteristic]

• Test Purpose
  Verify that the Alert Status Characteristic can be detected by the Phone Alert Status Client IUT.

• Reference
  [4] 4.2

• Initial Condition
  Establish an ATT Bearer connection between the Lower Tester and IUT; see 4.2.

  The Lower Tester includes at least one instantiation of the Phone Alert Status Service [7].

  The IUT has executed PASP/CL/PPD/BV-01-I [Discover Phone Alert Status Service], and has saved the handle range for an instantiation of the Phone Alert Status Service. That instantiation contains an instantiation of the Alert Status characteristic.

• Test Procedure
  The Upper Tester issues a command to the IUT to discover characteristics. There are two alternatives:


  2. Execute the procedure included in GATT.TS [6] Discover Characteristics by UUID, GATT/CL/GAD/BV-05-C once, with the characteristic UUID set to « Alert Status », with the database specified in initial conditions.
• Expected Outcome

Pass verdict

One attribute handle is returned for an Alert Status Characteristic implemented in the Lower Tester.

4.3.3  PASP/CL/PPD/BV-03-I [Discover Alert Status – Client Characteristic Configuration Descriptor]

• Test Purpose

Verify that the Phone Alert Status Client IUT can discover the Client Characteristic Configuration descriptor of the Alert Status characteristic.

• Reference

[4] 4.2

• Initial Condition

Establish an ATT Bearer connection between the Lower Tester and IUT; see 4.2.

The Lower Tester includes at least one instantiation of the Phone Alert Status Service [7].

The IUT has executed PASP/CL/PPD/BV-01-I [Discover Phone Alert Status Service], and has saved the handle range for an instantiation of the Phone Alert Status Service.

• Test Procedure

The Upper Tester issues a command to the IUT to Discover All Characteristic Descriptors using the handle range returned after running PASP/CL/PPD/BV-01-I [Discover Phone Alert Status Service] above.


• Expected Outcome

Pass verdict

At least one attribute handle/UUID pair is returned with UUID = «Client Characteristic Descriptor».
4.3.4  PASP/CL/PPD/BV-04-I [Discover Ringer Setting Characteristic]

• Test Purpose
  Verify that the Ringer Setting Characteristic can be detected by the Phone Alert Status Client IUT.

• Reference
  [4] 4.2

• Initial Condition
  Establish an ATT Bearer connection between the Lower Tester and IUT; see 4.2.
  The Lower Tester includes at least one instantiation of the Phone Alert Status Service [7].
  The IUT has executed PASP/CL/PPD/BV-01-I [Discover Phone Alert Status Service], and has saved the handle range for an instantiation of the Phone Alert Status Service. That instantiation contains an instantiation of the Ringer Setting characteristic.

• Test Procedure
  The Upper Tester issues a command to the IUT to discover characteristics. There are two alternatives:


• Expected Outcome
  Pass verdict
  One attribute handle is returned for a Ringer Setting Characteristic implemented in the Lower Tester.

4.3.5  PASP/CL/PPD/BV-05-I [Discover Ringer Setting – Client Characteristic Configuration Descriptor]

• Test Purpose
  Verify that the Phone Alert Status Client IUT can discover the Client Characteristic Configuration descriptor of the Ringer Setting characteristic.

• Reference
  [4] 4.2

• Initial Condition
  Establish an ATT Bearer connection between the Lower Tester and IUT; see 4.2.
  The Lower Tester includes at least one instantiation of the Phone Alert Status Service [7].
  The IUT has executed PASP/CL/PPD/BV-01-I [Discover Phone Alert Status Service], and has saved the handle range for an instantiation of the Phone Alert Status Service.
• Test Procedure

The Upper Tester issues a command to the IUT to Discover All Characteristic Descriptors using the handle range returned after running PASP/CL/PPD/BV-01-I [Discover Phone Alert Status Service] above.


ALT 1: last handle \neq end handle

• Expected Outcome

Pass verdict

At least one attribute handle/UUID pair is returned with UUID = «Client Characteristic Descriptor».

4.3.6 PASP/CL/PPD/BV-06-I [Discover Ringer Control Point Characteristic]

• Test Purpose

Verify that the Ringer Control Point Characteristic can be detected by the Phone Alert Status Client IUT.

• Reference

[4] 4.2

• Initial Condition

Establish an ATT Bearer connection between the Lower Tester and IUT; see 4.2.

The Lower Tester includes at least one instantiation of the Phone Alert Status Service [7].

The IUT has executed PASP/CL/PPD/BV-01-I [Discover Phone Alert Status Service], and has saved the handle range for an instantiation of the Phone Alert Status Service. That instantiation contains an instantiation of the Ringer Control Point characteristic.
• Test Procedure
  The Upper Tester issues a command to the IUT to discover characteristics. There are two alternatives:

  2. Execute the procedure included in GATT.TS [6] Discover Characteristics by UUID, GATT/CL/GAD/BV-05-C once, with the characteristic UUID set to «Ringer Control Point», with the database specified in initial conditions.

• Expected Outcome
  Pass verdict

  One attribute handle is returned for a Ringer Control Point Characteristic implemented in the Lower Tester.

4.4 Configuration Feature

The procedures defined in this test group verify Phone Alert Status Server IUT implementation of the Features defined in the Phone Alert Status Profile Specification [4] by a Phone Alert Status Server IUT, and usage of the same features by a Phone Alert Status Client IUT.

4.4.1 PASP/CL/PPCF/BV-01-I [Alert Status Characteristic Configuration, write with 0x0001]

• Test Purpose
  Verify that the Phone Alert Status Client IUT can configure the Client Characteristic Configuration of Alert Status in a Phone Alert Status Server.

• Reference

• Initial Condition
  A preamble procedure defined in Section 4.2 is used to setup the transport and L2CAP channel.

  The Lower Tester includes one instantiation of the Phone Alert Status Service [7].

  The IUT has executed PASP/CL/PPD/BV-03-I [Discover Alert Status – Client Characteristic Configuration Descriptor], and has saved the handle of a Client Characteristic Configuration for Alert Status Characteristic.

• Test Procedure
  The Upper Tester issues a command to the IUT to configure to receive Ringer Setting.
• Expected Outcome

Pass verdict

The IUT sends a correctly formatted ATT_Write_Request to the Lower Tester, containing the handle specified by the Upper Tester, and the value set to <0x0001, Notification>.

The IUT receives a correctly formatted ATT_Write_Response from the Lower Tester and sends the WriteResponse to the Upper Tester.

4.4.2 PASP/CL/PPCF/BV-03-I [Ringer Setting Characteristic Configuration, write with 0x0001]

• Test Purpose

Verify that the Phone Alert Status Client IUT can configure the Client Characteristic Configuration of Ringer Setting in a Phone Alert Status Server.

• Reference

[4] 4.8

• Initial Condition

A preamble procedure defined in Section 4.2 is used to setup the transport and L2CAP channel.

The Lower Tester includes one instantiation of the Phone Alert Status Service [7].

The IUT has executed PASP/CL/PPD/BV-05-I [Discover Ringer Setting – Client Characteristic Configuration Descriptor], and has saved the handle of a Client Characteristic Configuration for Ringer Setting Characteristic.

• Test Procedure

The Upper Tester issues a command to the IUT to configure to receive Alert Status.
• Expected Outcome

Pass verdict

The IUT sends a correctly formatted ATT_Write_Request to the Lower Tester, containing the handle specified by the Upper Tester, and the value set to <0x0001, Notification>.

The IUT receives a correctly formatted ATT_Write_Response from the Lower Tester and sends the WriteResponse to the Upper Tester.

4.5 Read Features

The procedures defined in this test group verify Phone Alert Status Server IUT implementation of the Features defined in the Phone Alert Status Profile Specification [4] by a Phone Alert Status Server IUT, and usage of the same features by a Phone Alert Status Client IUT.

4.5.1 PASP/CL/PPRF/BV-01-I [Alert Status Characteristic read]

• Test Purpose

Verify that the Phone Alert Status Client IUT can read the Alert Status value in a Phone Alert Status Server.

• Reference

[4] 4.3

• Initial Condition

A preamble procedure defined in Section 4.2 is used to setup the transport and L2CAP channel.

The Lower Tester includes one instantiation of the Phone Alert Status Service [7].

The IUT has executed PASP/CL/PPD/BV-02-I [Discover Alert Status Characteristic], and has saved the handle range for an instantiation of the Phone Alert Status Service. That instantiation contains an instantiation of the Alert Status characteristic.
• Test Procedure

The Upper Tester issues a command to the IUT to read Alert Status characteristics. Execute GATT.TS [6] Read Characteristic Value, GATT/CL/GAR/BV-01-C.

![Diagram]

L2CAP Connection established over selected transport. PASP/CL/PPD/BV-02-I has been executed.

ATT_Read_Request
(Code = 0x0A, Handle)

ATT_Read_Response
(Code = 0x0B, value)

ReadReg
(handle)

ReadRes
(value)

• Expected Outcome

Pass verdict

The IUT sends a correctly formatted ATT_Read_Request to the Lower Tester, containing the handle specified by the Upper Tester.

The IUT receives a correctly formatted ATT_Read_Response from the Lower Tester and sends the ReadRes containing the correct Alert Status value to the Upper Tester.

The received Alert Status value matches the one sent by the Lower Tester.

4.5.2 PASP/CL/PPRF/BV-02-I [Ringer Setting Characteristic, read]

• Test Purpose

Verify that the Phone Alert Status Client IUT can read the Ringer Setting value in a Phone Alert Status Server.

• Reference


• Initial Condition

A preamble procedure defined in Section 4.2 is used to setup the transport and L2CAP channel.

The Lower Tester includes one instantiation of the Phone Alert Status Service [7].

The IUT has executed PASP/CL/PPD/BV-04-I [Discover Ringer Setting Characteristic], and has saved the handle range for an instantiation of the Phone Alert Status Service. That instantiation contains an instantiation of the Ringer Setting characteristic.
• **Test Procedure**

The Upper Tester issues a command to the IUT to read Ringer Setting.

Execute GATT.TS [6] Read Characteristic Value, GATT/CL/GAR/BV-01-C,

• **Expected Outcome**

Pass verdict

The IUT sends a correctly formatted ATT_Read_Request to the Lower Tester, containing the handle specified by the Upper Tester.

The IUT receives a correctly formatted ATT_Read_Response from the Lower Tester and sends the ReadRes containing the correct the Ringer Setting value to the Upper Tester.

The received Ringer Setting value matches the one sent by the Lower Tester.

### 4.6 Write Features

• **Test Purpose**

The procedures defined in this test group verify Phone Alert Status Server IUT implementation of the Features defined in the Phone Alert Status Profile Specification [4] by a Phone Alert Status Server IUT, and usage of the same features by a Phone Alert Status Client IUT.

Verify that the Phone Alert Status Client IUT can write the Ringer Control Point characteristic in a Phone Alert Status Server.

• **Reference**

[4] 4.9, 4.10

• **Initial Condition**

A preamble procedure defined in Section 4.2 is used to setup the transport and L2CAP channel.

The IUT has executed PASP/CL/PPD/BV-06-I [Discover Ringer Control Point Characteristic], and has saved the handle of a Ringer Control Point characteristic.

IUT has executed PASP/CL/PPCF/BV-01-I [Alert Status Characteristic Configuration, write with 0x0001] or PASP/CL/PPCF/BV-03-I [Ringer Setting Characteristic Configuration, write with 0x0001] if needed.

• **Test Procedure**

The following test procedure applies to the test cases listed in the table below:

1. If the test case is for set to "silent mode", set to silent mode by writing value 0x01 to the Ringer Control Point by executing the test procedure of GATT test case GATT/SR/GAW/BV-01-C.

2. If the test case is for set to "release silent mode", set to release silent mode by writing value 0x03 to the Ringer Control Point.

3. If the test case is for execute "mute a ringer once", execute mute a ringer once by writing value 0x02 to the Ringer Control Point.
• Expected Outcome
The following pass and Fail verdicts apply to the test cases listed in the table below:

Pass verdict
The characteristic value is successfully written according to Table 4.2 value requirements.

Write Feature Test Cases

<table>
<thead>
<tr>
<th>Test Case</th>
<th>Value Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.6.1 PASP/CL/PPWF/BV-01-C [Ringer Control Point Characteristic, set to silent mode]</td>
<td>0x01</td>
</tr>
<tr>
<td>4.6.2 PASP/CL/PPWF/BV-02-C [Ringer Control Point Characteristic, mute a ringer once]</td>
<td>0x02</td>
</tr>
<tr>
<td>4.6.3 PASP/CL/PPWF/BV-03-C [Ringer Control Point Characteristic, set to release silent mode]</td>
<td>0x03</td>
</tr>
</tbody>
</table>

Table 4.2: Write Feature Test Cases

4.7 Notify Feature
The procedures defined in this test group verify Phone Alert Status Server IUT implementation of the Features defined in the Phone Alert Status Profile Specification [4] by a Phone Alert Status Server IUT, and usage of the same features by a Phone Alert Status Client IUT.

4.7.1 PASP/CL/PPNF/BV-01-I [Alert Status Characteristic, Notify]

• Test Purpose
Verify that the Phone Alert Status Client IUT can receive notification of the Alert Status characteristic in a Phone Alert Status Server.

• Reference
[4] 4.4

• Initial Condition
A preamble procedure defined in Section 4.2 is used to setup the transport and L2CAP channel.
The Lower Tester includes one instantiation of the Phone Alert Status Service [7].

The IUT has executed PASP/CL/PPD/BV-02-I [Discover Alert Status Characteristic], and has saved the handle of an Alert Status Characteristic.

The IUT has executed PASP/CL/PPCF/BV-01-I [Alert Status Characteristic Configuration, write with 0x0001] to expect Alert Status Notification.

• Test Procedure
  The Lower Tester sends an ATT_Handle_Value_Notification containing an Alert Status characteristic value to the IUT.

  • Expected Outcome
    Pass verdict
    The IUT indicated the received Alert Status value to the Upper Tester, e.g. Notification (Alert Status value: 0x01, Ringer state active). The reported Alert Status value matches the one sent by the Lower Tester.

4.7.2 PASP/CL/PPNF/BV-02-I [Ringer Setting Characteristic, Notify]

• Test Purpose
  Verify that the Phone Alert Status Client IUT can receive notification of the Ringer Setting characteristic in a Phone Alert Status Server.

• Reference

• Initial Condition
  A preamble procedure defined in Section 4.2 is used to setup the transport and L2CAP channel.

  The Lower Tester includes one instantiation of the Phone Alert Status Service [7].

  The IUT has executed PASP/CL/PPD/BV-03-I [Discover Alert Status – Client Characteristic Configuration Descriptor], and has saved the handle of a Ringer Setting characteristic.
The IUT has executed **PASP/CL/PPCF/BV-03-I** [Ringer Setting Characteristic Configuration, write with 0x0001] to expect Ringer Setting Notification.

- **Test Procedure**
  
  The Lower Tester sends an **ATT_Handle_Value_Notification** containing a Ringer Setting characteristic value to the IUT.

  ![Diagram](image)

  - **Expected Outcome**
    
    **Pass verdict**

    The IUT indicated the received Ringer Setting value to the Upper Tester, e.g. Notification (Ringer Setting value: 0x00, mute). The reported Ringer Setting value matches the one sent by the Lower Tester.

**4.8 Phone Alert Status Client Behavior**

The procedures defined in this test group verify Phone Alert Status Server IUT implementation of the Features defined in the Phone Alert Status Profile Specification [4] by a Phone Alert Status Server IUT, and usage of the same features by a Phone Alert Status Client IUT.

**4.8.1 PASP/CL/PPCB/BV-01-I [Read the Alert Status after Connection Setup]**

- **Test Purpose**
  
  Verify that the Phone Alert Status Client IUT start to read the Alert Status characteristic in a Phone Alert Status Server.

- **Reference**
  
  [4] 4.11

- **Initial Condition**

  The Lower Tester and IUT are disconnected.

- **Test Procedure**

  The Lower Tester connects to the IUT and starts connection setup (including service discovery and service search).
• Expected Outcome
  Pass verdict

  The IUT indicated reads the Alert Status characteristic in the Phone Alert Status server spontaneously.

4.9 Connection Features

The procedures defined in this test group verify Phone Alert Status Server IUT implementation of the Features defined in the Phone Alert Status Profile Specification [4] by a Phone Alert Status Server IUT, and usage of the same features by a Phone Alert Status Client IUT.

4.9.1 Verify Bond Status on Reconnection

• Test Purpose
  Verify that the Central starts encryption with a previously bonded Peripheral on reconnection, and success.

• Test Case IDs
  PASP/CL/TPCN/BV-01-I
  PASP/SR/TPCN/BV-01-I

• Reference
  [4] 5.2.3

• Initial Condition
  The IUT and the Lower Tester are bonded.

  No connection is established between the IUT and Lower Tester.

• Test Procedure
  1. The Lower Tester begins advertising using GAP undirected connectable mode.
  2. The IUT establishes a connection to the Lower Tester.
  3. The IUT starts encryption when the connection is established.

• Expected Outcome
  Pass verdict

  The IUT starts encryption when the connection is established.

  Encryption is successfully done.
5 Test Case Mapping

The Test Case Mapping Table (TCMT) maps test cases to specific capabilities in the ICS. Profiles, protocols and services may define multiple roles, and it is possible that a product may implement more than one role. The product shall be tested in all roles for which support is declared in the ICS document.

The columns for the TCMT are defined as follows:

**Item:** contains an y/x reference, where y corresponds to the table number and x corresponds to the feature number as defined in the ICS Proforma for Phone Alert Status Profile (PASP) [3]. If the item is defined with Protocol, Profile or Service abbreviation before y/x, the table and feature number referenced are defined in the abbreviated ICS proforma document.

**Feature:** recommended to be the primary feature defined in the ICS being tested or may be the test case name.

**Test Case(s):** the applicable test case identifiers required for Bluetooth Qualification if the corresponding y/x references defined in the Item column are supported.

For purpose and structure of the ICS/IXIT proforma and instructions for completing the ICS/IXIT proforma refer to the Bluetooth ICS and IXIT proforma document.

<table>
<thead>
<tr>
<th>Item</th>
<th>Feature</th>
<th>Test Case(s)</th>
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<tbody>
<tr>
<td>PASP 7/1</td>
<td>Discover Phone Alert Status Service</td>
<td>PASP/CL/PPD/BV-01-I</td>
</tr>
<tr>
<td>PASP 7/2</td>
<td>Discover Alert Status characteristic</td>
<td>PASP/CL/PPD/BV-02-I</td>
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<tr>
<td>PASP 7/3</td>
<td>Discover Alert Status characteristic- Client Characteristic Configuration Descriptor</td>
<td>PASP/CL/PPD/BV-03-I</td>
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<tr>
<td>PASP 7/4</td>
<td>Discover Ringer Setting characteristic</td>
<td>PASP/CL/PPD/BV-04-I</td>
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<tr>
<td>PASP 7/5</td>
<td>Discover Ringer Setting characteristic- Client Characteristic Configuration Descriptor</td>
<td>PASP/CL/PPD/BV-05-I</td>
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<tr>
<td>PASP 7/6</td>
<td>Discover Ringer Control Point characteristic</td>
<td>PASP/CL/PPD/BV-06-I</td>
</tr>
<tr>
<td>PASP 8/1</td>
<td>Alert Status characteristic, read using handle</td>
<td>PASP/CL/PPRF/BV-01-I</td>
</tr>
<tr>
<td>PASP 8/2</td>
<td>Alert Status characteristic configuration with 0x0001</td>
<td>PASP/CL/PPCF/BV-01-I</td>
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<td>PASP 8/3</td>
<td>Receive notification of Alert Status characteristic</td>
<td>PASP/CL/PPPNF/BV-01-I</td>
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<td>PASP 8/4</td>
<td>Ringer Setting characteristic, read using handle</td>
<td>PASP/CL/PPRF/BV-02-I</td>
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<td>PASP 8/5</td>
<td>Ringer Setting characteristic configuration with 0x0001</td>
<td>PASP/CL/PPCF/BV-03-I</td>
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<tr>
<td>PASP 8/6</td>
<td>Receive notification of Ringer Setting characteristic</td>
<td>PASP/CL/PPPNF/BV-02-I</td>
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<td>PASP 8/7</td>
<td>Ringer Control Point characteristic, write without response to 0x02</td>
<td>PASP/CL/PPWF/BV-02-I</td>
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<td>Item</td>
<td>Feature</td>
<td>Test Case(s)</td>
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</tr>
<tr>
<td>PASP 8/8</td>
<td>Read the Alert Status after connection setup</td>
<td>PASP/CL/PPCB/BV-01-I</td>
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<tr>
<td>PASP 8/9 AND PASP 10/1</td>
<td>Verify Bond Status on Reconnection (Client IUT)</td>
<td>PASP/CL/TPCN/BV-01-I</td>
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<tr>
<td>PASP 4/1</td>
<td>Verify Bond Status on Reconnection (Server IUT)</td>
<td>PASP/SR/TPCN/BV-01-I</td>
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<tr>
<td>PASP 8/10</td>
<td>Ringer Control Point characteristic, write without response to 0x01</td>
<td>PASP/CL/PPWF/BV-01-I</td>
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<tr>
<td>PASP 8/11</td>
<td>Ringer Control Point characteristic, write without response to 0x03</td>
<td>PASP/CL/PPWF/BV-03-I</td>
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*Table 5.1: Test Case Mapping*
# 6 Revision History and Contributors

## Revision History

<table>
<thead>
<tr>
<th>Revision History</th>
<th>Date</th>
<th>Comments</th>
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<tr>
<td>1.0.0</td>
<td>2011-09-15</td>
<td>Adopted by the Bluetooth SIG Board of Directors</td>
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<tr>
<td>1.0.1r0</td>
<td>2012-05-20</td>
<td>TSE 4628: TCMT update for TP/PPWF/PPC/ BV-01-C and TP/PPWF/PPC/BV-03-C. Delete test cases TP/PPCF/PPC/BV-02-C and TP/PPCF/PPC/BV-04-C.</td>
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<tr>
<td>1.0.1</td>
<td>2012-07-24</td>
<td>Prepare for publication.</td>
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<tr>
<td>1.0.2r1</td>
<td>2012-09-05</td>
<td>TSE 4928: Changed all test case IDs from –C to –I. TSE 4954: Corrected editorial error in TCMT, Changed TP/PPCP/PPC/BV-01-C to TP/PPCB/PPC/BV-01-C in PASP 8/8.</td>
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<td>1.0.2</td>
<td>2012-10-30</td>
<td>Prepare for Publication</td>
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<td>1.0.3r00</td>
<td>2016-05-21</td>
<td>Converted to new Test Case ID conventions as defined in TSTO v4.1.</td>
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<tr>
<td>1.0.3r01</td>
<td>2016-06-08</td>
<td>Test Spec Template Conversion</td>
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<tr>
<td>1.0.3r02</td>
<td>2016-06-13</td>
<td>Split Verify Bond Status test case by role into two test cases (PASP/CL/TPCN/BV-01-I and PASP/SR/TPCN/BV-01-I) following conversion to new test case ID conventions.</td>
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<td>1.0.3</td>
<td>2016-07-14</td>
<td>Prepared for TCRL 2016-1 publication.</td>
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<tr>
<td>1.0.3 edition 2r00</td>
<td>2018-11-29</td>
<td>Editorial changes only. Template updated. Revision History and contributors moved to the end of the document.</td>
</tr>
<tr>
<td>1.0.3 edition 2</td>
<td>2020-01-08</td>
<td>Updated copyright page and confidentiality markings to support new Documentation Marking Requirements, performed minor formatting updates, and accepted all tracked changes to prepare for edition 2 publication.</td>
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</tbody>
</table>