Compliance & Certification Program for

ALLJOYN CERTIFIED

PROGRAM MANAGEMENT DOCUMENT
Version 4.0
THIS COMPLIANCE AND CERTIFICATION PROGRAM FOR ALLJOYN CERTIFIED PROGRAM MANAGEMENT DOCUMENT VERSION 4.0 (AND ALL PRIOR VERSIONS) AND ALL REFERENCED TEST CASES AND DOCUMENTATION WERE COMPLETED PRIOR TO THE COMBINATION OF THE ALLSEEN ALLIANCE, INC. INTO THE OPEN CONNECTIVITY FOUNDATION, INC. ALL LICENSES, INTELLECTUAL PROPERTY RIGHTS, AND OTHER RIGHTS, RESPONSIBILITIES, OBLIGATIONS, STANDARDS, AND PROTOCOLS ASSOCIATED WITH THIS COMPLIANCE AND CERTIFICATION PROGRAM ARE SUBJECT TO THE BYLAWS, INTELLECTUAL PROPERTY POLICY AND MEMBERSHIP AGREEMENTS OF THE ALLSEEN ALLIANCE, INC.
## VERSION CONTROL

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<td>Additional changes adding scenarios in section 2.5.7, figures in section 3.3, and review of Appendix A.</td>
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<td>3.1</td>
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</tr>
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<td>3.4</td>
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1 DEFINITION OF TERMS AND ACRONYMS

1.1 Definition of Terms

AllJoyn product  Product that includes AllJoyn functionality.

AllJoyn Certified™ The official name of the AllSeen Alliance certification program and certification mark.

AllSeen Alliance Open source nonprofit consortium providing open source software for widespread adoption of products, systems, and services for the Internet of Things.

AllSeen Alliance Certified Product Registry List including all AllJoyn Certified devices for AllJoyn technology. Alternatively an applicant may decide not to list any of its products in the Registry, either temporarily or permanently.

applicant OEM, manufacturer, vendor, etc., requesting AllJoyn Certification for a product.

Authorized Laboratory ISO 17025 accredited entity authorized by AllSeen Alliance to perform certification testing.

Certification Application Process performed by an applicant to request that a product goes through the AllJoyn certification process.

Certification Application Request ID Code assigned by the AllSeen Alliance to identify a Certification Application and to reference the related certification process during and after its completion.

Certification Authority Entity responsible for supplying product certificates for AllJoyn Certified products.

Certification Body Entity that assesses the documentation submitted for product certification, reviewing the correctness of the generation of the Test Plan and applicability of the test cases to the products. This entity provides the pass/fail recommendation to the Certification Authority.

child product A new product (belonging to a family of products) that is derived (variant) from an already certified product (parent product) belonging to the same family. The parent product is the most suitable representative of the family of products to certify which product becomes a child.

children products A group of new products belonging to a family of products that are derived (variants) from an already certified product (parent product) belonging to the same family. The parent product is the most suitable representative of the family of products to certify which become children.

Certificate of Conformity A document issued by the AllSeen Alliance to indicate that a product meets AllJoyn Certified requirements. The Certificate of Conformity grants the right to use the AllJoyn Certified mark on the product.
<table>
<thead>
<tr>
<th>Certification Process</th>
<th>Process through which AllSeen Alliance grants recognition to a product that meets certain AllJoyn specified requirements. This activity results in the issuance of a “Certificate of Conformity.”</th>
</tr>
</thead>
</table>
| Certification Administration Web Tool | AllSeen Alliance web tool for AllJoyn product certification lifecycle management.  
\[https://certify.alljoyn.org/\] |
| Certification Test Tool | Tool used to perform conformance testing on a product according to Interface Test Specifications. Certification Test Tool software is provided by the AllSeen Alliance. Certification Test Tool hardware is commercially available.  
\[https://certification-tool.allseenalliance.org/\] |
| Compliance & Certification | Applies when a product is in accordance with the AllJoyn Interface Definitions; also, the formal process intended to determine whether a product meets these specifications.  
compliant portion | The specific parts of a product (hardware, software, or combinations thereof) that implement the AllJoyn functionality as defined in the AllJoyn Interface Definitions and that are the objective of certification pursuant to the AllSeen Alliance Compliance & Certification Program. The parts of a product that implement other functionalities, and do not interfere / affect the AllJoyn functionalities, do not form part of the Compliant Portion. |
<p>| Conformance Testing | Testing performed by using the Certification Test Tool to verify the compliance of an applicant AllJoyn implementation with AllJoyn features and service framework interface definitions. |
| Declaration of Changes document | Applicant document that states the hardware and/or software differences existing between two or more releases of a product. |
| End Product | Product including AllJoyn functionality intended to be sold to the final customer. |
| Family of products | Set of products marketed by the same applicant with the same (or similar) characteristics. These products are variations of the same basic product; all products of the family share generally the same AllJoyn functionality. To certify a family, the product that represents all products of the family (for features and complexity) is selected as the parent product, which is certified as a new product. The other products belonging to the family are certified as variants of the parent product minimizing the testing (usually testing is not needed) and the paperwork of the process. |
| Host | A computer or other hardware device where a Software Application or a Software Component can be installed and executed. Those Software elements need the host to run on it. |
| Implementation Conformance Statement (ICS) | Table that indicates whether the mandatory and optional features and functionalities that can be implemented in the product to be tested are supported. The ICS template is included in the Test Specifications. |</p>
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implementation</td>
<td>List of additional parameters that together with the ICS completely defines the features and functionalities supported by the product to be tested.</td>
</tr>
<tr>
<td>eXtra Information for Testing (IXIT)</td>
<td>Document that defines an standard AllJoyn interface. An interface definition collects a group of bus methods, bus signals, and bus properties along with their associated type signatures into a named group</td>
</tr>
<tr>
<td>interoperability testing</td>
<td>Testing performed according to AllSeen Alliance Interoperability test cases to verify that an applicant AllJoyn implementation can interoperate with other applicant AllJoyn devices.</td>
</tr>
<tr>
<td>Module</td>
<td>Product with AllJoyn functionality that can be embedded in another Product Integration.</td>
</tr>
<tr>
<td>New Product Certification</td>
<td>First certification of any product that cannot reuse testing from any other previously certified product.</td>
</tr>
<tr>
<td>parent product</td>
<td>Certified product from which other products may be derived that introduce differences in design or manufacturing compared with the original product (for Product Variant, Product Update, and Product Rebranding Certification categories).</td>
</tr>
<tr>
<td>product</td>
<td>A manufactured item that can be offered to a market that might satisfy a want or need.</td>
</tr>
<tr>
<td>Product Integration</td>
<td>Product that embeds an already certified Module or another certified End Product, to create a new End Product.</td>
</tr>
<tr>
<td>Product Rebranding Certification</td>
<td>Certification of a product where the only changes relative to an already certified product affect the upper applications, branding, packaging, or cosmetics of the product. The already certified product is called the parent. This certification is applied for by someone other than the applicant who certified the parent product.</td>
</tr>
<tr>
<td>Product Update Certification</td>
<td>Re-certification of a previously certified product in which some hardware and/or software modifications have been introduced. The previously certified product is called the 'parent'.</td>
</tr>
<tr>
<td>Product Variant Certification</td>
<td>Certification of a product that is similar to an already certified product from which some testing will be re-used. The already certified product is called the ‘parent’. A product can only be a variant of a New Product Certification. Variants of variants are not allowed.</td>
</tr>
<tr>
<td>Software Application</td>
<td>Product consisting of a piece of software only intended to work in a host device to provide it with AllJoyn functionality.</td>
</tr>
<tr>
<td>Software Component</td>
<td>Software element that manages hardware and software resources and provides AllJoyn services for software applications.</td>
</tr>
<tr>
<td>Test Bed</td>
<td>A Test Bed is a group of at least 3 certified products with a specific hardware/software configuration used for interoperability testing.</td>
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</table>
Test Case Control List (TCCL)  Lists all test cases and their associated test category. It serves as a reference document that can be updated on short notice without any update to the Test Specifications.

Test Case Mapping Table (TCMT)  Defines test structures, sequence charts, and test procedures for testing the Interface Definitions of the product to be tested. It also maps test cases to specific ICS items and features. This table is defined in the Test Specifications.

Test Plan  List of test cases to be executed to certify a product verifying compliance with AllSeen requirements.

1.2 Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
</tr>
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<tr>
<td>AL</td>
<td>Authorized Laboratory</td>
</tr>
<tr>
<td>CAWT</td>
<td>Certification Administration Web Tool</td>
</tr>
<tr>
<td>CCR</td>
<td>Certification Change Request</td>
</tr>
<tr>
<td>C&amp;C</td>
<td>Compliance &amp; Certification</td>
</tr>
<tr>
<td>DUT</td>
<td>device under test</td>
</tr>
<tr>
<td>GUI</td>
<td>graphical user interface</td>
</tr>
<tr>
<td>ICS</td>
<td>Implementation Conformance Statement</td>
</tr>
<tr>
<td>IXIT</td>
<td>Implementation eXtra Information for Testing</td>
</tr>
<tr>
<td>OEM</td>
<td>original equipment manufacturer</td>
</tr>
<tr>
<td>PMD</td>
<td>Program Management Document</td>
</tr>
<tr>
<td>TCMT</td>
<td>Test Case Mapping Table</td>
</tr>
<tr>
<td>TCCL</td>
<td>Test Case Control List</td>
</tr>
<tr>
<td>UE</td>
<td>user equipment</td>
</tr>
</tbody>
</table>
2 ALLJOYN CERTIFIED COMPLIANCE & CERTIFICATION PROGRAM

2.1 Introduction and Scope of Compliance & Certification Program

The purpose of this program is to certify product compliance with AllJoyn Interface Definitions and product interoperability with other compliant products. Certification is based on conformance and interoperability testing.

The Program Management Document, PMD, provides the framework where AllJoyn product certification can take place. The PMD defines the procedure to certify a product.

By participating in the AllJoyn Certified program, you are helping to make smart products interoperable and you are joining a connected network of companies, products, and applications.

AllSeen Alliance issues new certification releases approximately twice a year. A new certification release will include:

- AllJoyn Service Frameworks Interface Definitions new release.
- Source code according to the new release.
- Test Cases Specification new release revised in accordance with the new release of AllJoyn Service Frameworks Interface Definitions and related Test Case Mapping Table (TCMT) and ICS.
- Software for the Certification Test Tool implementing the new Test Specifications (test code).
- New Test Case Control List (TCCL) release.

<table>
<thead>
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<th>Certification Release yy.mm</th>
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<tr>
<td>- Interface definitions</td>
</tr>
<tr>
<td>- Source code based on interface definitions</td>
</tr>
<tr>
<td>- Test Specifications, TCMT &amp; ICS</td>
</tr>
<tr>
<td>- Test code based on Test Specifications</td>
</tr>
<tr>
<td>- Test Case Control List (TCCL)</td>
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Table 2.1-1 Certification Release Contents
### Table 2.1-2  Example of Certification Releases

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<td>15.04</td>
<td>About Feature TBD</td>
<td>About Feature TBD Test Case Specifications</td>
<td>15.04</td>
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<td>Control Panel Service Framework TBD</td>
<td>Control Panel Service Framework TBD Test Case Specifications</td>
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<td>Onboarding Service Framework TBD</td>
<td>Onboarding Service Framework TBD Test Case Specifications</td>
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<tr>
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<td>Configuration Service Framework TBD</td>
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<tr>
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<td>Audio Service Framework TBD Test Case Specifications</td>
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<tr>
<td></td>
<td>Lighting Service Framework TBD</td>
<td>Lighting Service Framework TBD Test Case Specifications</td>
<td></td>
</tr>
</tbody>
</table>

**AllSeen Alliance Certification of a product shall refer to a specific Certification Release that corresponds to the same specific Test Specifications release and related specific Interface Definitions release and with all requirements pertaining to such version. All versions must match in order to be certified.**

Certified Products are certified in perpetuity. At the beginning of the AllSeen Alliance Compliance & Certification Program, Modules or certified products that are going to be part of a Product Integration need to be re-certified every 3 years. When technology is mature, this period of time can be raised at the discretion of the AllSeen Alliance.

To ensure the success of the program, the AllSeen Alliance reserves the right to change, modify, and/or amend program policies through revisions of this document as deemed necessary.

### 2.2 Certification Key Principles

**Preserve brand value**
Ensure certified products are interoperable. Though not an absolute guarantee, this raises the bar for interoperability, so when customers see certified products, they can safely assume that the certified products are interoperable.

**Patent pledge based on certification**

Certified products benefit from the patent non-assertion pledge by the contributors. The certification program is the vehicle that allows for the verification of products so they can benefit from the pledge. In order to ensure proper verification, we need to ensure that the certification requirements are applied uniformly.

**Trust OEMs to the extent possible**

We want to trust the OEMs to a fair degree but without giving room for complacency or errors. We want to make sure the process empowers the OEMs and addresses their needs, but at the same time ensure that testing is done in a uniform manner (so as not to compromise brand value or patent pledge).

### 2.3 Certification Process Steps

From an applicant point of view, the certification process is divided into 4 steps.

![Certification Process Steps Diagram](image)

Figure 1  Certification Process Steps
2.3.1 Prepare

During this step, the applicant selects the Certification Releases (among the eligible certification releases) to be used with the certification of the product and determines the AllJoyn service(s) to be certified.

Next the applicant completes the development of the product with the selected Certification Release and completes the quality assurance process to prepare the product for certification.

An applicant does NOT need to be a member of the AllSeen Alliance. The applicant does need to become familiar with the AllSeen Alliance Certification Program requirements, including Legal Agreements:

- Certification Agreement.
- Program Management Document (PMD).
- Certification Policy.

The applicant will produce documents required for certification, including product ICS and IXIT using the ICS Template available from the AllSeen Alliance Compliance & Certification Program.

**Note:** It is recommended that the applicant performs internal development and quality assurance testing of the product to be certified by using the AllSeen Alliance Certification Test Tool, to ease the future Certification testing step.

In order to perform pre-certification testing, the applicant may access the AllSeen Alliance Certification Test Tool at [https://certification-tool.allseenalliance.org](https://certification-tool.allseenalliance.org). In this case, the applicant will generate a candidate test plan with the test cases to be executed. The Certification Test Tool may be used to obtain the candidate Test Plan.
2.3.2 Apply

An applicant willing to certify a product will submit a Certification Application to the AllSeen Alliance via the Certification Administration Web Tool (CAWT) at https://certify.alljoyn.org/. Among other things, it will include the following information:

- Certification release
- Product category
- Certification category
- Authorized Laboratory
- Product & applicant data

The applicant selects the Certification Release it will use for certification. Applicants are allowed to select any Certification Release that has been published during the last 24 months.
In the example in Figure 3, an applicant certifying his product in Feb 2017 may select to use certification releases 15.04, 15.09, 16.04, or 16.10.

The applicant selects the product category and certification category according to sections 2.4 and 2.6 respectively.

The applicant will select the Authorized Laboratory where testing is going to be performed and will include this information in the Certification Application.

As a general case, some AllJoyn devices may support several configurations, each configuration including a different set of AllJoyn features and service frameworks. The manufacturer may decide on the configuration that is used for marketing the product, which might not necessarily be the configuration including all supported features and service frameworks.

All AllJoyn devices are certified with just one configuration that includes all supported features and service frameworks supported by the device (if functionally possible). The certification of other product configurations that include only a subset of these features and service frameworks is implicitly included in the certification of the main configuration. This simplifies the certification process and avoids handling a matrix of documents (including ICS/IXIT) for each product configuration.

AllSeen Alliance will assign a Certification Application Request Identifier to the Certification Application to reference the product certification going forward.
2.3.3 Test

This step is only necessary for Certifications where testing is required to verify the certification requirements of a product according to the certification policies defined in section 3.

When testing is required, once the Authorized Laboratory accepts the Certification Application Request; it will collect certification documentation and with the Certification Body will generate the Test Plan based on:

- Product ICS and IXIT.
- Applicable release of Test Case Mapping Table (TCMT).
- Applicable release of Test Case Control List (TCCL).

The Authorized Laboratory will perform conformance and interoperability testing.

Conformance testing will be performed using the certification test tool to run the test cases of the interface test specifications.

The Authorized Laboratory will also perform interoperability testing by using Test Beds including several certified AllJoyn products where different scenarios will be tested.

Interoperability test case procedures are defined by AllSeen Alliance in a separate document. The Certification Test Tool also provides a guide to run the test cases according to these interoperability test procedures.

In case there are hardware and/or software changes in the product during the testing phase, the Authorized Laboratory will track these changes and the Certification Body will decide on appropriate regression testing according to these changes.
When Testing is completed, the Authorized Laboratory will issue a Test Report with testing results.

### 2.3.4 Certify

The following documents will be submitted by using CAWT tool after testing has been successfully completed. Documents will be reviewed by the Certification Body:

- Authorized Laboratory Test Report.
- CTT Testing evidence
- Applicable waivers approved by the AllSeen Alliance Certification Authority for the product.
- Applicant declarations:
  - Declaration of Changes document (for products certified with other than new product certifications). The Declaration of Changes document may be based on the template available at the Certification Administration Web Tool.
  - Other applicable declarations.
- A guide to using the product's AllJoyn enabled features (so that the product can be tested). This may be a standalone document or included in a user's guide.
- High-level product specifications (so that the products capabilities are understood). This may be a standalone document or included in a user's guide.
The table below summarizes the documents to be uploaded during the ‘Certify’ step.

<table>
<thead>
<tr>
<th>Certification cases</th>
<th>Documents required to obtain the certification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Test Report</td>
</tr>
<tr>
<td>New Product</td>
<td></td>
</tr>
<tr>
<td>End Product</td>
<td>●</td>
</tr>
<tr>
<td>Module</td>
<td>●</td>
</tr>
<tr>
<td>SW Component</td>
<td>●</td>
</tr>
<tr>
<td>Product Integration</td>
<td>●</td>
</tr>
<tr>
<td>Update</td>
<td></td>
</tr>
<tr>
<td>Major revision</td>
<td>●</td>
</tr>
<tr>
<td>Minor revision</td>
<td>●</td>
</tr>
<tr>
<td>No AllJoyn changes</td>
<td>-</td>
</tr>
<tr>
<td>Variant</td>
<td></td>
</tr>
<tr>
<td>Major revision</td>
<td>●</td>
</tr>
<tr>
<td>Minor revision</td>
<td>●</td>
</tr>
<tr>
<td>No AllJoyn changes</td>
<td>-</td>
</tr>
<tr>
<td>Re-branding</td>
<td></td>
</tr>
<tr>
<td>Re-branding</td>
<td>-</td>
</tr>
</tbody>
</table>

Table 2.3-1  Product information required for certification

- : Not required  
● : Required  
○ : only if necessary

Additionally, when a product is re-using testing from a parent product:

The test report of the parent product does not need to be included explicitly in the documentation submission. CAWT allows the Certification Body to access the test report of the parent product if it is necessary.

The Test report should be submitted within five business days after completing the testing for the review of the Certification Body. It may be submitted by the Laboratory that has performed the testing or by the applicant (OEM).

The applicant will submit the remaining necessary information to the Certification Body for product certification.

The applicant will pay all certification fees after all documents have been submitted to the Certification Body.

The Certification Body will review the submitted documentation and will verify:

- Documentation correctness and completeness.
Product fulfills Certification requirements: that is, all applicable testing has been successfully performed or inherited from an appropriate parent product.

All certification fees are paid.

When all requirements are met, the Certification Body will inform the Certification Authority who will issue the AllJoyn Certified Certificate of Conformity and will list the product in the AllSeen Alliance Certified Product Registry (if this is agreed upon with the applicant).

2.4 Services to Be Certified

To become AllJoyn Certified, a product must meet the following minimum requirements:

SHALL implement a version of AllJoyn Core that has been accepted into the Base Implementation and marked as Active. Active Base Implementation versions of the Core are indicated by the tag ABI on the AllJoyn Certification Matrix.

SHALL implement at least one of the Required Services that has been accepted into the Base Implementation that is associated for use with the selected version of the AllJoyn core. These associated versions of required services are indicated with a check mark on the row of the version of core being used on the AllJoyn Certification Matrix.

All of the AllJoyn interfaces implemented on a product MUST successfully pass the AllJoyn compliance tests to be certified.

If a product implements capabilities encompassed by a service framework that is Active and Accepted in the Base Implementation as indicated on the AllJoyn

![Figure 6 Certify](image-url)
Certification Matrix, it SHALL implement that service framework. It MAY implement its own AllJoyn Interfaces in addition to those of the service framework.

All AllJoyn products SHALL implement a mechanism that enables the AllJoyn portion of the product’s firmware to be updated automatically (OTA) or manually by the end user.

The release version of the AllJoyn Core SHALL match the version of any Requires Services on a product. For example, if a product implements version 14.12 of the AllJoyn Core, any Required Service it implements SHALL be 14.12.

### 2.5 Product Categories

The following figure shows all product categories contemplated.

#### Figure 7  Product Categories

<table>
<thead>
<tr>
<th>Is your product a Software element managing HW and SW resources providing AllJoyn Services to Software Applications?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes → Software Component</td>
</tr>
<tr>
<td>No → Does your product include a certified device/module inside?</td>
</tr>
<tr>
<td>Yes → Product Integration</td>
</tr>
<tr>
<td>No → Will your product be embedded in another device?</td>
</tr>
<tr>
<td>Yes → Module</td>
</tr>
<tr>
<td>No → End Product</td>
</tr>
</tbody>
</table>

#### 2.5.1 End Product

An End Product is a product including AllJoyn functionality that is intended to be sold to the final customer and has qualified for AllJoyn Certification.

#### 2.5.2 Module

A Module is a product with AllJoyn functionality that can be embedded in another Product Integration.

A Module is a product based on a hardware and software combination that provides the AllJoyn compliant portion to a Product Integration when it is embedded into it.

A Module can be AllJoyn Certified on its own allowing Product Integrations to reuse the Module certification process.

A Module is a device that can be incorporated into multiple final products. It can be a stand-alone device or a card requiring a “host” system to be tested and certified.
Modules allow that Product Integrations into which Modules are embedded can be certified either without undergoing certification testing or by undergoing a reduced subset of testing.

### 2.5.3 Product Integration

A Product Integration is a product that embeds an already certified Module, or another certified End Product to create a new End Product.

To get the benefit of the reduced certification testing, the Product Integration must use hardware and software releases of the Module that are already AllJoyn Certified.

OEMs that do not have experience on AllJoyn technology can use certified Modules from an AllJoyn Module vendor to create products supporting AllJoyn technology.

### 2.5.4 Software Component

A Software Component is a software element that manages hardware and software resources and provides AllJoyn services for software applications.

A Software Component can be deployed independently of other software elements and is subject to composition by third parties.

Because all of the interfaces between components are standardized, it is possible to mix Software Components from different manufacturers in a single system.

A Software Component needs a host environment (hardware) to run on and hence is not considered to be an independent unit.

Examples of a Software Component are operating systems and software elements implementing AllJoyn functionality and providing an API for upper software applications.

### 2.6 Certification Categories

There are four categories of Certification Applications. These categories are represented in the following figure and described in the following sections.

<table>
<thead>
<tr>
<th>Certification Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is your product a Brand change of an already certified product?</td>
</tr>
<tr>
<td>Does your product have a HW/SW modification of an already certified product?</td>
</tr>
<tr>
<td>Is your product similar to an already certified product?</td>
</tr>
</tbody>
</table>

**Figure 8  Certification Categories**
2.6.1 New Product Certification
A New Product Certification is the first AllJoyn certification for a product of any product category.

2.6.2 Product Update Certification
A Product Update Certification certifies a new release of an already certified product with a software and/or hardware modification.

2.6.3 Product Variant Certification
A Product Variant Certification certifies a new product with software and/or hardware set of modifications from an already certified product from which some certification testing can be reused.

2.6.4 Product Re-Branding Certification
A Product Rebranding Certification certifies a product where the only changes performed related to an already certified product affect the branding of the product and optionally upper applications, packaging, and/or cosmetics of the product.

2.7 Types of Changes to a Parent Product
When a product looking for certification is based on a parent product from which it intends to reuse some testing, the changes between the new product and the parent product need to be identified.

The following types of changes need to be defined:

- Major Revision Changes
- Minor Revision Changes
- Changes that do not affect AllJoyn functionality
- Device Identification Attribute changes

2.7.1 Major Revision Changes
Major revisions are those changes to a certified product that affect AllJoyn interoperability. Only changes that are major need to go through an authorized laboratory (third party or OEM) for testing.

The following changes to a product are defined as major revision changes:
- Hardware changes affecting AllJoyn functionality of the product.
- Major changes to AllJoyn Application ‘App Code’ functions that use AllJoyn functionality.
  - Addition/removal of Service Frameworks.
  - Addition/removal of AllJoyn interfaces.
  - Major modification of AllJoyn interfaces.
    - Modification in the use of properties, methods, and/or signals of any interface.
    - Addition of supported languages.
  - Modification of the version of the interfaces used.
- Change of AllJoyn Certification Release where Service Frameworks Interface Definitions used by the AllJoyn Application are modified.
- Modification of the product MMI affecting AllJoyn (for example, display of Notification Service messages).
- Adding/removing use of data-driven API (DDAPI) for AllJoyn (publish/subscribe paradigm).
- Adding/removing an AllJoyn router in the application.

2.7.2 Minor Revision Changes

Minor revisions are changes to hardware or software, such as bug fixes, that would not affect AllJoyn interoperability.

Following changes to a product are defined as minor revision changes:

- Changes in the hardware of the AllJoyn that do not affect AllJoyn interoperability, such as a design change to the hardware board that may not affect interoperability.
- Minor changes to AllJoyn Application ‘App Code’ functions that use AllJoyn functionality (such as bug fixing, cleanup, and so on.)
- Modification of About Announcement data fields: AppId, DeviceName, DeviceId, AppName, Manufacturer, ModelNumber, Description, DateOfManufacture, SoftwareVersion, AJSoftwareVersion, HardwareVersion and/or SupportUrl.
- Modification of Interfaces’ default languages.
- Change of AllJoyn Certification Release where Service Frameworks Interface Definitions used by the AllJoyn Application are not modified.

2.7.3 Changes that Do Not Affect AllJoyn Functionality

The following changes to a product do not affect AllJoyn functionality

- Major or minor hardware changes not affecting AllJoyn functionality of the product.
  - Adding/Removing non-AllJoyn-related Modules.
- Replacing hardware elements of the AllJoyn board by equivalent ones.
- Cosmetic changes of the AllJoyn board.
- Form Factor changes to the product.
- Modification of software not affecting AllJoyn functionality.
  - Changes in software modules other than AllJoyn Modules.
  - Changes in Man Machine Interface not affecting AllJoyn functionality.

2.7.4 Device Identification Attribute Changes
Device identification attribute changes are product changes that do not affect AllJoyn functionality. They may include any of the following:

- Product branding.
- Software changes associated with the GUI and re-branding that do not affect the compliant portion.
- Hardware changes associated with cosmetic packaging.
- Cosmetics of the product.

2.8 Certification Scenarios
Depending on the product category being submitted for certification, and the certification category chosen by the OEM, different certification scenarios can be identified.

The table below summarizes the possibility to reuse test results based on product categories and certification categories.

<table>
<thead>
<tr>
<th>Product Category</th>
<th>New Product Certification</th>
<th>Product Variant Certification</th>
<th>Product Update Certification</th>
<th>Re-branding Certification</th>
</tr>
</thead>
<tbody>
<tr>
<td>End Product</td>
<td>No</td>
<td>Yes (from parent End Product)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Module</td>
<td>No</td>
<td>Yes (from parent Module)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Product Integration</td>
<td>Yes (from Module)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Software Component</td>
<td>No</td>
<td>Yes (from parent Software Component)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Table 2.8-1 Inheritance of Test Results
2.8.1 New Product Certification: End Product

This scenario is defined for products including AllJoyn functionality that have not previously been AllJoyn Certified before and are potential candidates for AllJoyn certification.

AllJoyn functionality included in the product has not been AllJoyn certified before. The functionality has not been even partially AllJoyn Certified in other products, or at least, the applicant does not intend to reuse any testing evidences from previous certifications for current certification process.

In this scenario, the product may not embed any AllJoyn Certified Module or AllJoyn Certified device.

An End Product undergoing New Product Certification will be tested against all applicable test cases as defined by Test Specs, ICS, and AllSeen requirements (TCCL).

Test results from other products cannot be reused for this device.

2.8.2 New Product Certification: Module

This scenario is defined for Modules requesting for AllJoyn certification whose AllJoyn functionality has not been AllJoyn Certified before.

The New Product Certification of a Module requires that a complete set of applicable test cases are executed against this device. The only difference between this and a New Product Certification of an End Product is that in the Certification Application, the product is defined as a Module. That is, it is intended to be embedded in Product Integrations and some additional documentation is required to define integration conditions.

If the Module requires a host system to be certified, the host system can also be certified as a Product Integration during the certification process.

2.8.3 New Product Certification: Product Integration

This scenario is defined for products looking for AllJoyn Certification that include an already certified Module or End Product.

The Module/integration concept is created to simplify the design and certification of the Product Integration. This certification is performed reusing documentation and test results from the certification of the Module or End Product with which the product is integrated.

The applicant must indicate the certified Module or End Product, including hardware and software version, embedded in the Product Integration.

Integrations can only include a Module or End Product with certified hardware and software release.

Section 3.7 defines Module and Product Integration Certification Policies.
2.8.4 New Product Certification: Software Component

This scenario is defined for Software Components that include AllJoyn functionality that have not been AllJoyn Certified before and are potential candidates for AllJoyn certification.

Software Components may be installed in different hardware elements and they can be used by different Software Applications.

Software Components undergoing New Product Certification, in the same way as an End Product, will be tested against all applicable test cases as defined by Test Specs, ICS, and AllSeen requirements (TCCL).

Test results from other products cannot be reused for this device.

2.8.5 Product Update

The certification of a Product Update is understood as the notification of changes in an already certified product and the verification of its compliance. As a result of this certification, the new version of the product is added to the list of the certified releases of the product.

End Products, Software Components, Modules, and Product Integrations are candidates for Product Update certifications.

Product Update Certification is necessary to re-certify the hardware and/or software changes that a product has during its life cycle for fixing bugs, improving characteristics, changing marketing aspects, and so on.

Section 3.4 defines Product Update Certification Policies.

2.8.6 Product Variant

The certification of a product variant is the certification of a new product, but reusing test results from an already certified product from which the variant is a derivative.

The already certified product is called the “parent”.

The testing is only required when the differences with the parent product affect the compliant portion. Testing can be reduced to in the aspects of the compliant portion that might be affected by the differences. Otherwise, only a declaration from the applicant will be required to get the certification of the product variant.

End Products, Software Components, Integrations, and Modules can be certified by a Product Variant Certification process.

Section 3.5 defines Product Variant Certification Policies.

2.8.7 Family of Products

The certification scenario of a family of products is an administrative simplification of the parent/variant product scheme when several similar products are going to be certified at the same time (a family of products is launched to the market). This concept eases the certification process to the applicant and will reduce the certification costs.
A product from the family is selected as the parent product. The parent goes to a certification process very similar to the process that would apply to any other End Product.

The other products (children) of the family are defined as members of a family and the parent product is identified. The rules to define applicable testing will be the same as defined for Product Variant Certification, but defining the child product as a family product allows a reduced certification fee (according to the certification fees schedule defined by the AllSeen Alliance). Each child product will obtain its own Certificate of Conformity. A unique Certification Application may be considered by AllSeen Alliance to cover certification of all products in a family. This will simplify certification of families of many different products with exactly the same AllJoyn compliance portion.

The concept family of products can be applied to end products, to Modules and to product integrations.

Section 3.6 defines family of products certification policies.

2.8.8 Product Rebranding (Certification Transfer)

The certification of a Product Rebranding is similar to the certification of a Product Update (general case), but considering that the certification is done by a different applicant than the original product (parent product). A rebranded product is identical to the original product where only the commercial name and the owner of the Certificate of Conformity change. Other changes might be in the upper layer applications associated with the GUI that are not part of the compliant portion.

Product Rebranding can be applied to End Products, Software Components, Modules and Product Integrations.

Section 3.9 defines Product Rebranding Certification Policies.

2.8.9 Certification Scenarios Examples

The tables below show some examples of certification alternatives for different product categories.
Scenario 1

<table>
<thead>
<tr>
<th>Applicant Action</th>
<th>Product</th>
<th>Certification</th>
<th>Testing Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicant MyBrand @ develops a new AllJoyn product Model A (e.g., a refrigerator, a TV set, or a speaker) that is not a derivative product from any other already certified product and seeks AllJoyn Certification.</td>
<td>End Product</td>
<td>New Product</td>
<td>Complete</td>
</tr>
</tbody>
</table>

Product Example

Table 2.8-2  Example of New Product Certification
Scenario 2

<table>
<thead>
<tr>
<th>Applicant Action</th>
<th>Product</th>
<th>Certification</th>
<th>Testing Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicant MyBrand @ updates product Model A with some changes, from Rev. 1 to Rev. 2 (e.g., to solve some bugs) not affecting AllJoyn functionality. In this case testing will not be necessary.</td>
<td>End Product</td>
<td>Product Update</td>
<td>No</td>
</tr>
</tbody>
</table>

Product Example

![Model A](image1) @

Model A

Rev. 1

![Model A](image2) @

Model A

Rev. 2

Table 2.8-3 Example of Product Update Certification (with No Testing)
## Scenario 3

<table>
<thead>
<tr>
<th>Applicant Action</th>
<th>Product</th>
<th>Certification</th>
<th>Testing Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicant MyBrand updates product Model A, from Rev. 2 to Rev. 3 (e.g., to resolve bugs or add functionality) affecting AllJoyn functionality. In this case, testing will be necessary.</td>
<td>End Product</td>
<td>Product Update</td>
<td>Partial</td>
</tr>
</tbody>
</table>

### Product Example

![Product Example Image](image)

*Table 2.8-4  Example of Product Update Certification (with Testing)*
## Scenario 4

<table>
<thead>
<tr>
<th>Applicant Action</th>
<th>Product</th>
<th>Certification</th>
<th>Testing Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicant <strong>MyBrand @</strong> develops a new product <strong>Model B</strong> that is based on or is similar to product <strong>Model A</strong> (e.g., a similar refrigerator, TV set, or speaker) and intends to reuse testing from <strong>Model A</strong> Certification. Differences between <strong>Model A</strong> and <strong>Model B</strong> do <strong>not affect</strong> AllJoyn functionality.</td>
<td>End Product</td>
<td>Product Variant</td>
<td>No</td>
</tr>
</tbody>
</table>

### Product Example

![Diagram of Model A and Model B](image)

Table 2.8-5  *Example of Product Variant Certification*
Scenario 5

<table>
<thead>
<tr>
<th>Applicant Action</th>
<th>Product</th>
<th>Certification</th>
<th>Testing Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicant MyBrand @ develops a new product Model B that is based on or is similar to product Model A (e.g., a similar refrigerator, TV set, or speaker) and intends to reuse testing from Model A Certification. Differences between Model A and Model B do affect AllJoyn functionality.</td>
<td>End Product</td>
<td>Product Variant</td>
<td>Partial</td>
</tr>
</tbody>
</table>

Product Example

Table 2.8-6  Example of Product Variant Certification
### Scenario 6

<table>
<thead>
<tr>
<th>Applicant Action</th>
<th>Product</th>
<th>Certification</th>
<th>Testing Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicant MyBrand @ develops a family of products (e.g., 10 different refrigerators) all of them including exactly the same AllJoyn functionality (same software and same hardware). Applicant wants to certify all products together. Applicant MyBrand @ selects the Model G1 product, which can be eligible for representing all products among the family. This Model G1 product is the parent of the family and is certified as a new product.</td>
<td>End Product</td>
<td>Product Family (parent)</td>
<td>Complete</td>
</tr>
</tbody>
</table>

**Product Example**
<table>
<thead>
<tr>
<th>Applicant Action</th>
<th>Product</th>
<th>Certification</th>
<th>Testing Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model G1 Rev. 1</td>
<td>Model G1 Rev. 1</td>
<td>@</td>
<td></td>
</tr>
<tr>
<td>Model G2 Rev. 1</td>
<td>Model G2 Rev. 1</td>
<td>@</td>
<td></td>
</tr>
<tr>
<td>Model G2 Rev. 1</td>
<td>Model G3 Rev. 1</td>
<td>@</td>
<td></td>
</tr>
<tr>
<td>Model G3 Rev. 1</td>
<td>Model G4 Rev. 1</td>
<td>@</td>
<td></td>
</tr>
<tr>
<td>Model G4 Rev. 1</td>
<td>Model G5 Rev. 1</td>
<td>@</td>
<td></td>
</tr>
</tbody>
</table>

Table 2.8-7  Example of Certification of the Parent of a Product Family
## Scenario 7

<table>
<thead>
<tr>
<th>Applicant Action</th>
<th>Product</th>
<th>Certification</th>
<th>Testing Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicant <strong>MyBrand</strong> develops a family of products (e.g., 10 different refrigerators) all of them including exactly the same AllJoyn functionality (same software and same hardware). Applicant wants to certify all products together. Applicant <strong>MyBrand</strong> has selected the <strong>Model G1</strong> product as parent and has certified it. The remaining products of the family (children) are certified as variants of the parent <strong>Model G1</strong>.</td>
<td>End Product</td>
<td>Product Family (children)</td>
<td>Partial or no testing (most likely)</td>
</tr>
</tbody>
</table>

**Product Example**
<table>
<thead>
<tr>
<th>Applicant Action</th>
<th>Product</th>
<th>Certification</th>
<th>Testing Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model G1 Rev. 1</td>
<td>Model G2 Rev. 1</td>
<td>Model G3 Rev. 1</td>
<td>Model G4 Rev. 1</td>
</tr>
<tr>
<td>Model G1 Rev. 1</td>
<td>Model G2 Rev. 1</td>
<td>Model G3 Rev. 1</td>
<td>Model G5 Rev. 1</td>
</tr>
</tbody>
</table>

*Table 2.8-8  Example of Certification of the Children of a Product Family*
Scenario 8

Applicant Action | Product | Certification | Testing Needed
--- | --- | --- | ---
Applicant **ModBrand &** develops an AllJoyn product **Model C** that is not a derivative product of any other already certified product. It is intended to be sold to manufacturers of End Products, so the applicant can integrate **Model C** in their products to include AllJoyn functionality. | Module | New Product | Complete

Product Example

![Model C](image)

**Table 2.8-9**  *Example of Module Certification*
Scenario 9

<table>
<thead>
<tr>
<th>Applicant Action</th>
<th>Product</th>
<th>Certification</th>
<th>Testing Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicant IntBrand β develops a product Model D (e.g., A refrigerator, a TV set, or a speaker) and buys product (Module) Model C from applicant ModBrand &amp; to integrate it into Model D to provide AllJoyn functionality.</td>
<td>Integrated Product</td>
<td>New Product</td>
<td>Partial or no testing (most likely)</td>
</tr>
</tbody>
</table>

Product Example

![Table 2.8-10 Example of Integrated Product Certification](image-url)

**Table 2.8-10**  
*Example of Integrated Product Certification*
Scenario 10

<table>
<thead>
<tr>
<th>Applicant Action</th>
<th>Product</th>
<th>Certification</th>
<th>Testing Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicant NewBrand § agrees with Applicant MyBrand @ to market Model A product with the brand of a Applicant NewBrand § Model A product is rebranded to Model E product but AllJoyn functionality is not affected in the rebranding process.</td>
<td>End Product</td>
<td>Product Rebranding</td>
<td>No testing (most likely)</td>
</tr>
</tbody>
</table>

### Product Example

![Product Rebranding Diagram](image_url)

**Table 2.8-11** Example of Product Rebranding Certification
2.9 Certification Requirements

2.9.1 Conformance Testing
Conformance testing verifies the compliance of the applicant AllJoyn implementation of a product with AllJoyn features and service framework interface definitions.

Conformance testing is performed by means of emulation of the behavior of other devices with which the AllJoyn implementation of the product under test has to interact. This is done using the Certification Test Tool defined by the AllSeen Alliance.

2.9.2 Interoperability Testing
The objective of interoperability testing is to provide a high probability of interoperability between other AllJoyn compliant devices.

Interoperability testing is applicable to AllJoyn devices requesting AllJoyn certification.

Interoperability Test Procedures document (available in the CAWT) includes the test cases set defined by the AllSeen Alliance to be run to complete Interoperability testing and a number of Test Beds to be used during the testing.

A Test Bed is a group of at least 3 certified products with a defined hardware and software release and a specific configuration. AllSeen Alliance defines the list of products that can be used as part of the Test Bed and the configuration to be used.

Test Beds of different products may be defined to test different Service Frameworks.

In addition to the certified products to be used as part of the Test Bed, AllSeen Alliance may also define a list of Reference Units (Golden Units) that shall be used as part of the Test Bed for interoperability testing.

The Test Bed shall include Reference Units from at least two different manufacturers.

2.10 Usage of AllSeen Alliance Authorized Laboratory

When an applicant submits a Certification Application, it selects the Authorized Laboratory that will perform the testing.

The applicant will book required laboratory testing resources before the testing starts. Product documentation, including ICS, will be provided to the Authorized Laboratory so booking time can be properly assigned.

Before testing starts, the applicant will provide the following:

- Samples (at least 3) for official testing.
- Certification Application submitted via CAWT.
- Completed ICS/IXIT declaration.
- User manual of the product to be certified.
- Detailed documentation explaining how to configure and use the product for testing.
2.11 Test Plan

2.11.1 Description of ICS and IXIT

ICS, Implementation Conformance Statement

An Implementation Conformance Statement is a structured document that asserts which specific requirements are met by a given implementation of a list of features and service frameworks.

IXIT, Implementation eXtra Information for Testing

The IXIT includes additional information provided by the applicant, not included in ICS, needed for testing, such as:

- Physical setup, connection of test, and testing environment.
- DUT hardware, telephone numbers, and test equipment addresses.
- Test-specific timer or parameter values.

2.11.2 Description of Test Case Mapping Table (TCMT)

The TCMT is a set of tables that include the list of test cases and the applicability of each individual test case for a device according to ICS values.

Test case applicability may be mandatory for all devices or conditional depending on supported ICS values.

A TCMT release is related to a specific Test Specification release.

TCMT and ICS are part of the Test Specification.

2.11.3 Description of Test Case Control List (TCCL)

The TCCL is a list of the test cases that are requested by AllSeen Alliance to certify a product.

Every test case inside the TCCL is assigned a test category that defines testing requirements for that specific test case.

Test Case Control List releases are published periodically by AllSeen Alliance.

TCCL provides following information for every test case:

- Test case reference.
- Test case description.
- Test case category.
- Test Specification release.
- Active date when the test case was included in TCCL.
• Test case category in previous Certification Release (previous TCCL release).
• Notes.

2.11.4 Determination of the Test Plan
Test plan to certify a product is defined based on the following:
• ICS.
• Test Case Mapping Table.
• Test Case Control List.

For all three documents, the corresponding release of the selected Certification Release will be used.
ICS and TCMT together will define the test cases that are applicable to a product according to the Test Specification.
TCCL will filter the test cases required by AllSeen Alliance for Certification from the Test Specification applicable test cases.

Applicants of products supporting several configurations, where each configuration has a different ICS definition, may have different applicable test cases for each configuration. The Test Plan will include the lists of applicable test cases per configuration.

After a complete Test Plan has been defined for a product, for certifications other than New Product Certifications, the Certification Body will decide, based on the applicant Declaration of Changes document, which test evidences from other certified products can be re-used for current product certification.

2.12 Test Cases

2.12.1 Test Cases Verdicts
The following definitions cover all possible verdicts that can be obtained after test cases execution:

Pass
A test verdict of Pass is given when the observed test outcome gives evidence of compliance to the conformance or interoperability requirement(s) on which the test purpose of the test case is focused, and when no invalid test event has been detected.

Fail
A test verdict of Fail is given when the observed test outcome either demonstrates non-compliance with respect to (at least one of) the conformance or interoperability requirement(s) on which the test purpose of the test case is focused, or contains at least one invalid test event, with respect to the relevant specification(s).
Inconclusive

A test verdict of Inconclusive is given when the observed test outcome is such that neither a pass nor a fail verdict can be given.

2.12.2 Test Cases Categories

The following test case categories are defined:

Category A

Test case has been validated to verify the conformance of the product. Every device has to be tested against this test case if applicable and get a Pass verdict as part of its certification process. The test case is fully validated with no testing restrictions.

Category B

The test case has not been completely validated to verify the conformance of the product; i.e., the test case is validated but with limitations.

These are typically test cases that have been verified, and can be executed, but for which a test case implementation validation may be incomplete.

This category is used for:

- Means of Test where test purposes are not fully tested, because parts of the Means of Test are incorrect and therefore not valid for accredited testing.
- Means of Test where a Pass verdict is a correct verdict, but a Fail verdict may not be correct.
- Means of Test not validated for a special UE configuration.

Every device has to be tested against this test case, if applicable, as part of its certification process:

- Devices not affected by the test case limitation(s) need to get a Pass verdict.
- Devices affected by the test case limitation(s) might get an Inconclusive or Fail verdict if the reason for not getting a Pass verdict is the test case limitation.

This category may also be used whenever a test is performed using an acceptable alternative method, i.e., best available means.

Category D

This category is assigned when the test case has been downgraded from category A or B and must be revalidated and reinstated to its prior status without delay.

The test case does not need to be performed for product certification until the test case is revalidated.

Category N
This category is assigned for test cases that were part of the certification scope in the past but they are not currently required.

The test case does not need any testing or declaration.

**Category P**

This category is assigned when the test case is not validated but AllSeen Alliance has defined the test case as intended to be used for product certification and accordingly it is pending validation.

The test case does not need to be performed for product certification.

### 2.12.3 Test Case Evolution and Transition

Test cases categories are published in the Test Case Control List (TCCL).

A new TCCL release will be published at least every 6 months together with new Certification Releases.

If there is a change in a test case inside the same TCCL release, a TCCL Addendum will be issued.

The following figure shows an example about how a TCCL addendum can be interleaved between two TCCL releases.
The test cases category may change over time. There are two phases in the evolution handling of the test cases. An initial phase of the AllSeen Alliance Compliance & Certification program simplifies the categories and the evolution handling. Later, when the technology is consolidated and mature, a steady phase will use all categories of test cases with a more complex handling procedure of the evolution between these categories.

The transition between the initial phase and the steady phase will be decided at the discretion of AllSeen Alliance.

**Initial Test Case Evolution Phase**

Only categories A, D, and P are used.

TCCL Addendum can only be used for category A test cases being downgraded to category D or for Category D test cases recovering their old category.

The evolution dynamics are the following:

- Test cases are initially assigned with test category P when they are included in the TCCL as selected for development and intended product certification in the future.
- When a test case is initially validated (without limitations), it is moved to category A.
- If a category P test case can only be partially validated, because the test case has any limitation of use, the test case remains in category P.
- If a test case validated in category A, is found to have some limitations that may affect the test case verdict under certain circumstances, the test case is moved to category D.
- If a test case validated in category A is found to have some bugs that affect all types of devices, the test case is moved to category D.
- If a test case validated in category A is found to have some bugs that affect all types of devices in a Test Equipment “TE1” but is fully validated in other Test Equipment “TE2,” it will keep category A. However, the test case will be downgraded when used in Test Equipment TE1. Test cases are not necessarily downgraded due to a single Test Equipment losing validated status.
- A test case may be immediately downgraded to a lower category (from category A to category D).
- A test case in category D may be upgraded to category A without waiting for a new TCCL release.
- Test cases that remain downgraded in category D at the effective date of the next TCCL release are moved to category P for the new TCCL release.
Table below shows an example of test case categories evolution.

<table>
<thead>
<tr>
<th>Test Case</th>
<th>Release N</th>
<th>Release N, Addendum 1</th>
<th>Release N+1</th>
<th>Release N+2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test case 1-01</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>Test case 1-02</td>
<td>A</td>
<td>D</td>
<td>P</td>
<td>A</td>
</tr>
<tr>
<td>Test case 1-03</td>
<td>P</td>
<td>P</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>Test case 1-04</td>
<td></td>
<td>P</td>
<td></td>
<td>A</td>
</tr>
</tbody>
</table>

**Table 2.12-1  Example of Test Cases Evolution Through Releases in the Initial Phase**

**Steady Test Case Evolution Phase**

All categories A, B, D, N, and P are used.

TCCL Addendum can only be used for category A or category B test cases being downgraded to category B or category D or for category B or D test cases recovering their old category.

The evolution dynamics are the following:

- Test cases are initially assigned with test category P when they are included in the TCCL as selected for development and intended product certification in the future.
- When a test case is initially validated (without limitations) is moved to category. A.
- If a category P test case can only be partially validated, because the test case has any limitation of use, the test case is validated to category B.
• If a test case validated in category A is found to have some limitations that may affect the test case verdict under certain circumstances, the test case is moved to category B.

• If a test case validated in category A is found to have some bugs that affect all types of devices, the test case is moved to category D.

• If a test case validated in category A is found to have some bugs that affect all types of devices in a Test Equipment TE1 but is fully validated in other Test Equipment TE2, it will keep category A. However, the test case will be downgraded when used in Test Equipment TE1. Test cases are not necessarily downgraded due to a single Test Equipment losing validated status.

• A test case that is in category A, B, or D and that is not required any more for certification is moved to category N.

• A test case that is in category B and is fully revalidated changes to category A.

• A test case may be immediately downgraded to a lower category (from category A to category B or to category D and from category B to category D).

• A test case in category D may be upgraded to category A or category B without waiting for a new TCCL release.

• Test cases that remain downgraded in category D at the effective date of the next TCCL release are moved to category P for the new TCCL release.

The table below shows an example of test case categories evolution.

---

**Figure 11  Test Case Categories in the Steady Phase**

The table below shows an example of test case categories evolution.
Test Case | Release N | Release N, Addendum 1 | Release N+1 | Release N+2
--- | --- | --- | --- | ---
Test case 1-01 | A | A | B | A
Test case 1-02 | A | A | A | A
Test case 1-03 | A | D | P | A
Test case 1-04 | P | P | A | A
Test case 1-05 | | P | A |
Test case 2-01 | B | B | A | A
Test case 2-02 | A | A | N | N
Test case 2-03 | A | D | A | B
Test case 2-04 | P | P | B | A

Table 2.12-2  Example of Test Cases Evolution Through Releases in the Steady Phase

2.12.4 Test Case Validation

Test case validation is the process of checking that a Test Equipment fulfills its intended purpose to verify product compliance to test specifications. This process validates the correct implementation of the test cases when used in a Test Equipment.

Validation of test cases is performed by a third party: by an AllSeen Alliance Authorized Laboratory or by other parties designated by AllSeen Alliance.

The validation of a conformance test case refers to the validation of a test code release from a GIT repository of a specific test case and the ‘Test Equipment’ used to run the test.

The Test Equipment is defined as the hardware and software elements that are used to run a conformance test case release downloaded from AllSeen GIT repository.

The validation of an interoperability test case refers to the validation of a test procedure including one or more Test Beds to verify the compliance of the DUT when interacting with other AllJoyn devices.
When a test case becomes validated with a Test Equipment, it may imply the upgrade of the test case category to category A or category B in the TCCL. Validation of test cases in category P will become effective when a new TCCL release is published. This will avoid the modification of the Certification Scope of a device being certified against a defined TCCL release.

2.13 Test Report Contents

A Test Report to be submitted to AllSeen Alliance for a product certification will include at least following information:

- Product identification
  - Product name
  - Model name
  - Trademark
  - Final hardware version
  - Final software version
  - Description of the product
- Company information
  - Applicant name
  - Complete address
  - Contact information
- Features and Service Frameworks supported by the product
- Certification information
  - Certification Release
  - Type of product
2.14 Roles in the Certification Process

2.14.1 Certification Applicant

The Certification Applicant is an entity that submits a Certification Application to AllSeen Alliance to get a product AllJoyn Certified. The applicant does not need to be a member of AllSeen Alliance.

The applicant is responsible for:

- Submitting Certification Applications.
- Providing all required product documentation (including ICS, IXIT, and applicant declarations).
- Selecting one or more Authorized Laboratories to perform Certification testing.
- Providing product samples with ancillaries to the Authorized Laboratory to perform the testing.

2.14.2 Authorized Laboratory

An Authorized Laboratory, AL, is an ISO 17025 accredited entity assessed and authorized by AllSeen Alliance with the following responsibilities:

- **Test Plan generation:** The Authorized Laboratory generates the Test Plan by means of using the Certification Test Tool, which has the functionality for
automatically creating the Test Plan. The Authorized Laboratory sets the ICS and IXIT parameters of the product in the Certification Test Tool to create the Test Plan.

- **Testing execution**: The Authorized Laboratory performs testing according to the Compliance & Certification Program accepted by the AllSeen Alliance as technical evidence of compliance of AllJoyn reference specifications to certify products.

- **Test Report generation**: The Authorized Laboratory writes the Test Report when all testing is completed.

- **Submission of documents**: The Authorized Laboratory submits formally all testing evidences and associated documents to the Certification Body for assessment.

### 2.14.3 Certification Body

The Certification Body is an entity (person or group) that has the following responsibilities:

- **Test Plan assessment**: The Certification Body performs the Test Plan assessment for certification consisting of checking the correctness of the generation of the Test Plan and applicability of the test cases to the products.

- **Certification documentation assessment**: The Certification Body assesses the correctness of the documentation to be submitted from the Authorized Laboratory and/or the applicant to the AllSeen Alliance to request a product certification.

- **Certification issues assessment**: The Certification Body will receive CCRs (see section 3.12) and will define issues affecting a Test case or Test Equipment that is affecting the certification process.

Authorized Laboratory may also take the role of the Certification Body. This makes the certification process faster, less complicated, and easier to understand by OEMs.

### 2.14.4 Certification Authority

The Certification Authority is an entity that is under the control of the AllSeen Alliance.

The Certificate Authority is responsible for supplying product Certificate of Conformity for the use of AllJoyn functionality to products that have completed successfully the certification process and that comply with all certification requirements for AllJoyn devices.

The Certificate Authority shall also take decisions to approve/reject waiver requests as defined in section 3.11.
3 Certification Policies

3.1 General Policies

- AllJoyn versions are retired from the Base Implementation after 24 months from the date of release of the AllJoyn Core for that version or 12 months after the release of a newer version of the AllJoyn Core (whichever period is longer). The active version of AllJoyn SHALL not retire if no newer version of AllJoyn is available. Notice SHALL be provided at the release of the newer version of the AllJoyn Core.

- When retired, a version of AllJoyn Core and its related Required Services are no longer eligible for certification.

- When deprecated for security, a version of AllJoyn Core and its related Required Services is no longer eligible for use in certification, starting at the date of deprecation.

- The certification on a product does not expire except in the case of a version of AllJoyn becoming deprecated for security. In this case, products with a version of AllJoyn that becomes deprecated and which are being actively sold in the market SHALL implement a version of AllJoyn from the Active Base Implementation from the available versions on the AllJoyn Certification Matrix and thus require recertification within 180 days, or as soon as reasonable and commercially viable. After this the certification of the initial product will expire.

- Products in the field with a version of AllJoyn that has been deprecated because of security flaws SHOULD have their AllJoyn firmware updated to a valid version in 180 days. These products will need to be recertified.

- The AllSeen Alliance encourages but does not require manufacturers to update products in the field to the most current version and patch level of AllJoyn.

- The AllSeen Alliance encourages but does not require that products getting certified implement the latest version and patch of AllJoyn.

3.2 Registry of Certified Products

At the end of the product certification process, after the Certification Body has confirmed product compliance and after certification fees have been collected, AllSeen Alliance will enter the product information into the AllSeen Alliance Certified Product Registry and create a Certificate of Conformity.

In case the certification applicant member has any confidentiality concerns, the member can provide a specific listing date to include the product in the registry. At that time, the certified product will be included in the AllSeen Alliance Certified Product Registry.

3.2.1 Public Information Displayed with Certified Products

AllSeen Alliance, with the certification applicant member consent, will include following product information in the AllSeen Alliance Certified Product Registry:
• Certification reference number
• Date of certification
• AllSeen Alliance Certification Release
• Product name
• Certified features and Service Frameworks
• Product identification
• Optionally, a product image and URL to the product page
• For Product Integrations, certification reference number of the embedded certified product.

3.3 Stored Documentation of the Certified Products (Compliance Folder)

The applicant must store all test results and test logs used to substantiate applications for certification for a period of no fewer than 7 years.

Information that the applicant must store includes the following:

• Summary Test Report including:
  o Authorized Laboratory Test Reports for all testing performed on the product.
  o Authorized Laboratory Test Reports for all testing re-used from different parent products.

• ICS.
• IXIT.
• Certificates of Conformity.
• Declaration of Changes document (for products certified with other than New Product Certifications).
• Applicant Declarations (where applicable).
• Applicable waivers.
• Detailed hardware and software product description.
• User manual.
• Other applicant documents (as desired).

3.4 Product Update Certification Policies

A Product Update Certification is the re-certification of a new release of an already certified product with some hardware and/or software modifications to the certified product.
A new release of a product going through Product Update Certification shall not have the same hardware and software versions as the already certified product.

The certification of a product release does not cover other product releases (with different hardware and/or software). The re-certification (certification update) of the new release of the product is mandatory.

For every Product Update Certification, the applicant will provide a Declaration of Changes document indicating the changes of the product compared to the already certified product. The Declaration of Changes document may be based on the template available at https://allseen.causewaynow.com/wg/CC_WG/document/303. In any case, the document will have at least the fields listed in that template.

### 3.4.1 Types of Product Updates

Two different types of product updates can be identified:

- Product Update Certification where the differences between the new release of the product and the certified release do not affect the compliant portion.
- Product Update Certification where the differences between the new release of the product and the certified release affect the compliant portion. An updated product may have changes affecting the compliant portion for one or more Service Frameworks but not affecting other service frameworks.

### 3.4.2 Assessment of Retesting Consequences of the Updated Product

Product Update Certifications where the changes of the product do not affect the compliant portion do not require any testing for certification. In this case, only a declaration from the applicant justifying that the changes do not affect the compliant portion will be required in order to get the certification update. This declaration may be part of the Declaration of Changes document. Certification will be granted automatically without Certification Body assessment.

Product Update Certifications where the changes of the product affect the compliant portion will need re-testing. Testing can be partial, focusing only in the aspects of the compliant portion that might be affected.

The applicant may include in the Declaration of Changes document a proposal of testing to be performed for the Product Update Certification.

The Authorized Laboratory receiving a Product Update Certification Request will define the test plan to be performed based on the applicant Declaration of Changes Document. The Certification Body will perform a technical assessment about the Test Plan correctness.

### 3.5 Product Variant Certification Policies

Product Variant Certification with its own Certificate of Conformity is mandatory.
A Variant Can Be a Derivative from an End Product, a Product Integration or a Module

Product Variant Certifications must be based on a parent that has been certified with a New Product Certification (or Product Update of a New Product Certification); that
is, a product cannot be certified as a product variant of another product variant certified product.

Figure 14  *An End Product Variant Cannot Be a Derivative of Another Variant*
Figure 15  A Module Variant Cannot Be a Derivative of Another Variant

The Product Variant Certification may re-use test results from the certified parent product.

A product variant can have an end product, a Software Component, a Product Integration, or a Module parent.
A product variant of a Module is another Module.

In any case, the Product Variant Certification will use a TCCL release published during the last 24 months.

A Product Variant Certification shall not use an earlier TCCL release other than the release used to certify the parent product.

Test results from a Product Variant Certification of a product #1 similar to a product #2 going to Product Variant Certification may be reused for certification. The Certification Body will determine whether the test results can be carried over to product #2.

3.5.1 Assessment of Retesting Consequences of the Variant

Product Variant Certifications where the changes of the product do not affect the compliant portion do not need to perform any testing for certification. In this case a
declaration from the applicant justifying that the changes do not affect the compliant portion will be required in order to get the Product Variant Certification. This declaration may be part of the Declaration of Changes document or a different declaration document. This case will always require the Certification Body assessment and Certification Authority approval to get the certification.

In case the differences with the parent product affect the compliant portion, re-testing will be needed. Testing might be partial as only the aspects affecting the compliant portion need to be tested.

The applicant may include in the Declaration of Changes document a proposal of testing to be performed for the Product Variant Certification.

The Certification Body will perform a technical assessment to define the test plan to be performed based on the applicant Declaration of Changes Document.

3.6 Family of Product Policies

3.6.1 Certification Rules for Grouping Products into a Family

A Family of Products Certification only applies to products from the same applicant. A family of products can not include products from different vendors.

Family of products concept only applies to products whose compliant portion is identical.

Certification application shall describe the Module family in sufficient detail to allow the Certification Body to perform the evaluation of potential impact of product variations within the product family.

A certification application will be enough to cover all products within the family. The Certification Application will identify the parent product of the family.

3.6.2 Characteristics of the Parent Product of the Family

The parent product of the family is the product with higher complexity of the family being able to represent other products of the family from the certification point of view (it has all and more advanced options, several communication interfaces, etc.).

3.7 Module and Integration Policies

A certification applicant submitting a product for Certification may optionally designate the product as a Module.

Designating a certified product as a Module eases the reuse of the Module in a broader range of AllJoyn Product Integrations.

3.7.1 Characteristics of a Module

A Module has the same Certification Requirements as an End Product. Additionally, the following requirements apply:
• The description of a Module on the AllSeen Alliance Certified Product Registry shall identify the hardware and software that comprise the entire compliant portion as certified.

• It will include a description of the environment in which the Module must be used when included in a Product Integration, so as to assure the correct operation of the Module.

The Certification Body will assess whether the Module fulfills the certification requirements and whether the elements described as the Module contain the entire compliant portion.

The Certification Body will also verify that the information provided by the Module applicant assures integration and compliance with AllJoyn requirements.

3.7.2 Assessment of Retesting Consequences of the Integration

The Product Integration will reuse the testing from the Module certification.

The Certification Body will perform a technical assessment as to whether the Product Integration affects the compliant portion. If the compliant portion is not affected, testing will not be required. If the compliant portion is affected, the Certification Body will define the test plan to be performed based on the design documentation provided by the manufacturer of the Product Integration.

3.8 Software Components Policies

A Software Component has the same Certification Requirements as an End Product.

In addition, the following requirements apply:

• A Software Component needs a host environment in which to run in order to be certified.

• The Software Component host environment includes a hardware element (such as a computer or a mobile phone) and possibly other software elements.

• A software developer submitting a Software Component for certification will need to provide detailed information about:
  o The environment used for certifying the product.
  o Integration instructions for software developers using the Software Component.
  o Installation instructions for developers of hardware products where the Software Component is to be installed (where applicable).

Hardware products that host AllJoyn Certified Software Components will need to be certified in order to use the AllJoyn Certified mark.

End products that host certified Software Components will need to be separately certified by a New Product Certification process and the complete set of applicable test cases will be required in order to obtain certification. Testing performed in the
Software Component Certification cannot be used for the certification of hardware products hosting such software (unless the hardware product is exactly the same as used for the Software Component Certification).

A Software Component can also be certified as a product update, product variant, or rebranding from other Software Component.

### 3.9 Rebranding Policies

Rebranding Certification may reuse documentation and test evidences from the certification of the original product.

The certification of the product being rebranded with its own Certificate of Conformity is mandatory.

The applicant shall provide a complete description of the differences between the original supplier’s product and the receiving company’s (applicant) product.

Rebranding Certification does not require testing.

The transferred certification becomes independently owned by the receiving applicant. The receiving applicant accepts all future certification responsibilities.

After a product certification has been transferred, the receiving applicant may designate the product as a parent product and create dependent products.

Product certification can be transferred an unlimited number of times to an unlimited number of applicant companies.
3.9.1 Admissible Changes in a Rebranded Product

Only the following product changes are allowed in the Rebranding Certification of a product:

- Product branding.
- Software changes associated with GUI and rebranding not affecting the compliant portion.
- Hardware changes associated with cosmetic packaging.
- Cosmetics of the product.

Any other change of a product will imply that Rebranding Certification cannot be used, and the applicant will select a different type of certification process.

3.10 Reuse of Testing

Product Update, Product Variant, and Rebranding Certification categories, as well as the Product Integration category, are defined to allow an applicant to re-use testing performed on some products to certify other products with similar or the same AllJoyn characteristics.

Depending on the changes between the new product and the parent product, possibilities for testing re-use are defined in section 2.7.

Obviously, given the plethora of possible AllJoyn products, it is impossible for AllSeen Alliance to determine which of the product changes could affect AllJoyn interoperability. Hence the responsibility for determining the nature of the product update rests on the OEM. The OEM is the product expert and so they get to determine whether the change they are introducing would affect AllJoyn interoperability. This is part of the trust model between the Alliance and the OEM. AllSeen Alliance sincerely believes that OEMs will want interoperability of their products with other products in the marketplace, and they therefore will make wise choices when it comes to determining whether or not a product change (update or variant) affects AllJoyn interoperability.

The following table summarizes the testing requirements:
<table>
<thead>
<tr>
<th>Type of Product Change</th>
<th>Description</th>
<th>Declaration of Changes</th>
<th>Testing Applicable</th>
<th>Where to perform testing</th>
<th>Certification</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Product</td>
<td>End Product &amp; Module &amp; Software Component: Products not reusing any AllJoyn certification</td>
<td>Not Required</td>
<td>Conformance and interoperability testing (complete Test Plan)</td>
<td>Authorized Laboratory (3rd party or OEM)</td>
<td>New Product</td>
</tr>
<tr>
<td></td>
<td>Product Integration: Products embedding a certified module</td>
<td>Not Required</td>
<td>No testing</td>
<td>N/A</td>
<td>New Product</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not Required</td>
<td>Conformance and interoperability testing (partial Test Plan)</td>
<td>Authorized Laboratory (3rd party or OEM)</td>
<td>New Product</td>
</tr>
<tr>
<td>Major revision</td>
<td>Product changes affecting AllJoyn interoperability</td>
<td>Required</td>
<td>Conformance and interoperability testing (partial Test Plan)</td>
<td>Authorized Laboratory (3rd party or OEM)</td>
<td>Product Variant</td>
</tr>
<tr>
<td>Minor revision</td>
<td>Product changes NOT affecting AllJoyn interoperability</td>
<td>Required</td>
<td>Conformance testing</td>
<td>OEM</td>
<td>Product Variant</td>
</tr>
<tr>
<td>No AllJoyn changes</td>
<td>Product changes NOT affecting AllJoyn functionality</td>
<td>Required</td>
<td>No testing</td>
<td>N/A</td>
<td>Product Update (No testing)</td>
</tr>
<tr>
<td>Rebranding</td>
<td>Product changes are only Attribute changes including change of brand</td>
<td>Required</td>
<td>No testing</td>
<td>N/A</td>
<td>Rebranding</td>
</tr>
</tbody>
</table>

Table 3.10-1 Certification Testing Requirements
3.11 Waiver Process

3.11.1 Waiver Request Requirements Waiver Process

The waiver process allows a certification applicant to request an exemption from a specific certification requirement that will prevent or delay certification.

An applicant will start a waiver process in special circumstances where he believes there is a justifiable reason why a waiver should be granted.

The applicant must clearly explain the reason supporting the waiver request.

The waiver process will not be used for issues with Test Equipment or test cases that avoid correct test case execution according to test specification. Such issues will be handled by the Certification Change Request (CCR) as defined in section 3.12.

A waiver request submitted by an applicant will be reviewed by the Certification Authority.

Waiver requests will be analyzed by the Certification Authority in a case-by-case basis and will grant/reject the waiver request within 5 working days.

Waiver requests are confidential and will not be revealed outside the Certification Authority.

3.11.2 Waiver Submission

Waivers are submitted by the applicant via email, to the Certification Authority.

An applicant can submit a waiver for a specific product with a specific hardware and software version, or request the waiver for a family or products.

Submission of a waiver request does not guarantee approval of such waiver request.

A waiver can be submitted at any time during the certification process.

The applicant must use the latest version of the waiver request form, available for download at CAWT.

A waiver request may apply to New Product, Product Variant, Product Update, and Rebranding Certifications.

An applicant may request a waiver under several circumstances, such as:

- One or more test case failures.
- Re-certify a product against the latest Certification Release.

3.11.3 Waiver Approval/Rejection

The Certification Authority will analyze all information included in the waiver request. Waiver approval will be at the discretion of the Certification Authority.

After the waiver has been revised, the Certification Authority will complete the second part of the waiver request form indicating the Certification Authority’s decision.

If the Waiver has been rejected, the reasons specifying why the waiver request was rejected will be included in the Waiver Form. If will be also indicated whether there are conditions under which a revised waiver could be approved (where applicable).
Finally, the Certification Authority will send the revised Application Form to the Certification Request submitter.

3.12 Issues of the Certification Process

3.12.1 Issues with the Process

This section describes the way to handle different potential issues within the Certification process affecting conformance test cases. Issues affecting interoperability problems among devices are not relevant to this section.

Issues with the certification process can be due to:

- Issues with the test cases.
- Issues with the Test Tools.

The issues above could cause an unnecessary delay in a device certification. Accordingly, the Certification Change Request (CCR) process is provided to handle these situations. The Certification Change Request has to have at least the fields listed in Appendix A.

3.12.2 Issues with the Test Cases

Issues with the test cases can appear because:

- The Test Specification of a test case is not correct (test case description or ICS definition affecting the test case).
- The source code that implements the test case as defined in the test specification is not correct.

In both cases, the Certification Body will need to decide whether the issue is affecting the verdict of the test case, and if so, whether there is a workaround to solve the issue.

If there is no workaround to solve an issue, the test case will need to be downgraded (upon approval of the corresponding CCR) to:

- Category B: If the issue only affects certain implementations of the functionality to be tested.
- Category D: If the issue affects all devices.

When the Certification Body determines that there is an issue with a Test Case due to the test specification of a test case or to the source code of a test case, the Certification Body will inform the AllSeen Alliance in order to take actions to solve this issue.

3.12.3 Issues with the Test Tools

An issue may be caused by the Test Equipment in which a correct test case source code is running.
If the issue is affecting only one Test Equipment, the test case category does not need to be modified. It will be only modified the validation status of the test case on that Test Equipment.

If the issue is affecting all Test Equipment validated for a test case, the test case category needs to be downgraded to Category B (the issue is only affecting specific configurations not affecting all products) or Category D (the issue is affecting all products intending certification).

### 3.12.4 Change Request Process

The AllSeen Alliance Program provides the Certification Change Request (CCR) process to:

- Upgrade or downgrade the category of the test cases.
- Investigate a solution to potential problems in the certification process.

The Change Request Process is divided in 3 steps:

- **CCR Creation**: Any member of the AllSeen Alliance can create a CCR. With a CCR creation, a member requests the change of the category of a test case.

- **CCR Evaluation**: Any member may participate in the evaluation of a CCR. Submission of member comments to the CCR will be allowed during 5 working days.

- **CCR Resolution**: At the end of the evaluation period, the Certification Body will review the CCR and comments submitted and will approve or reject the CCR in no more than 5 business days. If required, current TCCL affected test case(s) categories will be updated accordingly.

A JIRA web tool is used by AllSeen Alliance to handle the CCR process.

### 3.13 Dispute Resolution Process

For interoperability problems, it is assumed that parties involved will solve any issue by communication between themselves, based on their commercial agreements.

For issues related to validated test cases, the Certification Body may request testing in an Authorized Laboratory agreed upon by all parties. The losing party shall pay the cost of the testing. Independence and confidentiality must be assured through the process.

If neither party is able to reach an agreement, and the process is blocked for 1 month, any of the parties may ask AllSeen Alliance for an arbitration process.

AllSeen Alliance will designate an Authorized Laboratory to perform the testing on the challenged issue(s). The losing party shall pay the cost of the testing.
3.14 Certification Violations

3.14.1 Definition of Certification Violation

The following scenarios are identified as certification violations:

- An OEM distributes an uncertified device, but the OEM claims that the product is certified.
- An OEM knowingly makes changes to a certified product that affects the AllJoyn certification requirements, and the OEM does not re-certify the device.
- An OEM provides samples for certification testing with HW/SW modifications with respect to the product to be commercialized without informing AllSeen Alliance.
- ICS / PIXIT information and/or product configuration provided for the certification process does not match the product in order to simplify or skip certification testing.

3.14.2 Identifying Violations

When a suspected certification violation is identified, the identifying party shall report this to the AllSeen Alliance Certification Authority (at certification@allseenalliance.org).

The identifying party shall provide documentation of the suspected certification violation and clarify the effects that this may cause according to its opinion.

AllSeen Alliance shall analyze the documentation. If AllSeen Alliance believes there is reasonable evidence of a certification violation, AllSeen Alliance shall contact the offending OEM and start discussions to clarify the case.

If it is determined that a certification violation has occurred, the AllSeen Alliance will decide whether to place the offending OEM on probation for a period of time.

The offending OEM shall not be held responsible for violations caused due to errors or omissions by the Authorized Laboratory responsible, by the AllSeen Alliance Certification Body, or by the Certification Authority during the certification process.

3.14.3 Probation

An OEM placed on probation may be subject to product auditing at an Authorized Laboratory determined by AllSeen Alliance. The OEM will pay for all the auditing cost, including the audit testing conducted by the AL.

If an OEM fails to comply with this requirement, or the OEM’s product fails to pass the audit testing, the OEM could be barred from receiving AllSeen Alliance Certifications for a period of time.

OEM certifications will be revoked upon 3 repeated violations.

3.14.4 Resolving Violations

An OEM found to be in violation shall immediately stop shipment of the offending product and correct the infraction (e.g., by a software update).
4 REFERENCES

APPENDIX A: Certification Change Request Form (fields to be entered into JIRA)

Date of issue of the CCR:

Certification Release affected:

Proposed change affects:
- Certification test tool
- Test Specifications
- Interface Definitions
- AllJoyn code for testing
- Program management document
- Other

Title of the Certification Change Request:

Working group owner:

Category:
- Correction
- Minor correction corresponding to a change in an earlier release
- Addition of feature
- Functional modification of feature
- Editorial modification

Reason for change:

Summary of change:

Consequences if not approved:

Specifications affected:

Other specifications affected:

Other comments: