Future Airborne Capability Environment (FACE™)

Conformance Policy

Version 2.0
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Prepared by the FACE Consortium Business Working Group Conformance Subcommittee and The Open Group

Future Airborne Capability Environment (FACE™): Conformance Policy

Document Number: X1608

Contents

Table of Figures

Table of Tables

1. Document Overview

1.1 Scope of this Document

This document defines the processes and policies that govern the Future Airborne Capability Environment (FACE™) Conformance Program. The goal of the FACE Conformance Program is to provide a trusted, accessible, and fair process for achieving FACE Conformance Certification. These processes and policies define what can be certified, what it means to be certified, and the process for achieving certification. They also define the obligations on Software Suppliers for FACE Conformance Certification. This policy applies to all editions of the FACE Technical Standard, hereafter referred to as the Technical Standard.

This document is intended for those interested in the certification of a Unit of Conformance (UoC) or a UoC Package. A UoC is any software designed to meet individual FACE segment (Operating System Segment (OSS), Input/Output Services Segment (IOSS), Platform-Specific Services Segment (PSSS), Transport Services Segment (TSS), and Portable Components Segment (PCS)) requirements. UoCs can be verified as conformant to the FACE Technical Standard. A UoC Package is a valid set of UoCs as defined in the FACE Technical Standard.

This policy – in conjunction with the Technical Standard and Certification Agreement – constitutes the set of requirements and obligations for achieving FACE Conformance Certification. Buyers – for example, government stakeholders intending to procure FACE Certified UoCs – will also find this document useful for understanding what they can expect from a FACE Certified UoC.

Recommended changes or problems identified within this document may be submitted to the FACE Consortium via the Problem Report/Change Request (PR/CR) process.

NOTE: Any Corrigendum to this document, the FACE Technical Standard, or other conformance-related products will be used to generate a subsequent .x edition/version of said product inclusive of the associated changes. Any corrigenda and the associated FACE document will not be referenced for conformance; only the resulting .x edition/version will be used for conformance.

1.2 FACE Conformance Certification

FACE Conformance Certification provides formal recognition of a UoC's conformance to the Technical Standard. All references in this document to "certification" or "certified" apply specifically and uniquely to FACE Conformance Certification. UoCs eligible for FACE Conformance Certification are those that meet the applicable Conformance Requirements in the Technical Standard. Individual UoCs will be targeted for conformance to the requirements and interfaces for the applicable segment and profile.

1.3 Terminology and Definitions

Table 1 defines terms or clarifies the meaning of words used within this document. Where an acronym is also used, it is provided in parentheses.

Table 1: Terms and Definitions

Term	Definition
Approved Correction	A solution, developed by the FACE Consortium and approved by the Steering Committee, for use in certification of a Unit of Conformance while a Problem Report exists.
Business Working Group Configuration Control Board (BWG CCB)	The entity responsible for managing and approving changes to the FACE Conformance Program reference documentation, processes, and legal agreements.
Certification Agreement	The agreement between the Software Supplier and the Certification Authority that defines the certification services to be provided.
Certification Authority (CA)	The entity officially sanctioned to manage the day-to-day operations of the FACE Conformance Program in accordance with the policies defined in this document.
Conformance Requirements	The applicable requirements contained within the Technical Standard.
Conformance Tools Configuration Control Board (CCB)	The entity responsible for coordinating with the test suite developers for the maintenance and configuration management of and upgrades to the FACE Conformance Test Suite.
Conformance Verification Matrix (CVM)	Requirements traceability spreadsheet assigning verification methods and conformance evidence recommendations for each conformance requirement within the Technical Standard.
Corrigendum	A correction to a document that fixes errors discovered after the document has been published. Any corrigendum published against a FACE document will result in versioning of the associated document to the next .x edition. Corrigenda and the associated FACE document will not be referenced for conformance; only the resulting .x edition will be used for conformance.
FACE Certified Unit of Conformance (UoC)	A Unit of Conformance that has successfully completed the FACE Conformance Program. The Software Supplier has accepted the Certification Agreement, and has received the Conformance Certificate from the Certification Authority.
FACE Configuration Control Board (FACE CCB)	The entity that reviews the work of the Product Configuration Control Boards to ensure the impact of changes recommended and/or implemented takes into account all of the products of the FACE Consortium. The FACE Configuration Control Board assesses proposals for corrections and reviews the corrections after they are implemented.
FACE Conformance Certificate	A document issued to a Software Supplier formally declaring that a Unit of Conformance, any associated conformant variants, and/or UoC Package has successfully met the requirements for certification.
FACE Conformance Certification Guide	The document that describes the processes for how a Software Supplier achieves FACE Conformance Certification for a Unit of Conformance. The Guide is used in conjunction with the policy document. The Guide provides detailed instructions on the steps a Software Supplier must take to get a Unit of Conformance certified and where to obtain relevant information and documents.

Term	Definition
FACE Conformance Test Suite(s)	A test suite that will accept the Unit of Conformance and produce a pass/fail with respect to all Conformance Requirements covered by the test suite plus a detailed report of the test results. Use of only approved test suite versions is mandatory for For-the-Record Verification testing.
FACE Library	The infrastructure developed to enable the discovery and acquisition of FACE Certified Units of Conformance.
FACE Product Configuration Control Board (CCB)	One of the entities who will evaluate and resolve a Problem Report, depending on the type of problem reported. The Product CCB will submit the proposal for an Approved Correction to the FACE CCB.
FACE Registry	The single online reference point for listing and managing all FACE Certified Units of Conformance. As the gateway to discovering certified products, it will include descriptions and locations of available FACE conformant products and the publishable standard licensing terms for each product.
FACE Triage Group (FTG)	The FACE Triage Group performs an initial review of all Problem Reports and performs the initial routing to one of several Product Configuration Control Boards for further investigation.
Software Product Set	The set of deliverables provided by the Software Supplier to the Verification Authority in order to execute the FACE Conformance Test Suite on a Unit of Conformance.
Software Supplier	A vendor who is interested in, is applying for certification in, or has certified a Unit of Conformance in the FACE Conformance Program.
Software Supplier's Statement of Conformance	The Software Supplier's documented set of claims describing precisely the way in which the Unit of Conformance meets the Conformance Requirements, including which conditional requirements are supported. It provides a precise identification of the FACE Certified UoC and the environment in which conformance is guaranteed.
Steering Committee (SC)	The governing body of the FACE Consortium. The FACE Consortium Steering Committee directs all activities of the FACE Consortium, including approval to submit all Consortium work products to The Open Group for official publication, creating new working groups and approving their charters, and defining and approving roles and responsibilities of the FACE Advisory Board.
Technical Working Group Configuration Control Board (TWG CCB)	The group responsible for developing, maintaining, and interpreting the Technical Standard.
Unit of Conformance (UoC)	Software designed to meet the requirements for an individual FACE segment (OSS, IOS, PSSS, TSS, and PCS) and profile. Units of Conformance must be verified as conformant to the FACE Technical Standard to be certified.
Unit of Conformance (UoC) Package	A valid collection of Units of Conformance that traverse FACE segments to create a singular software logical entity.

Term	Definition
Unit of Conformance (UoC) Variant(s)	Unit of Conformance Variants are versions of a Unit of Conformance generated to a specific set of functionality and target environment from the same Unit of Conformance source code. Unit of Conformance Variants which conform to the Technical Standard may be certified and listed together on a single FACE Conformance Certificate.
Unit of Portability (UoP)	A Unit of Conformance in the PCS, PSSS, or TSS. These Units of Conformance are inherently more portable due to the requirements placed on these sections by the FACE Technical Standard.
Verification Authority (VA)	An entity officially sanctioned by the Steering Committee to conduct or witness For-the-Record Verification testing using an approved version of the Conformance Test Suite and assess the Verification Evidence provided by the Software Supplier in support of the FACE Conformance Program. The Verification Authority may be an independent third-party entity or a designated internal, independent entity of the Software Supplier.

2.   FACE Conformance Overview

This section provides a description of the Conformance Reference Documents, an overview of the FACE Conformance Program, and a summary of its key entities and their roles.

Figure 1 depicts the high-level operational view (OV-1) of the FACE Conformance Program.
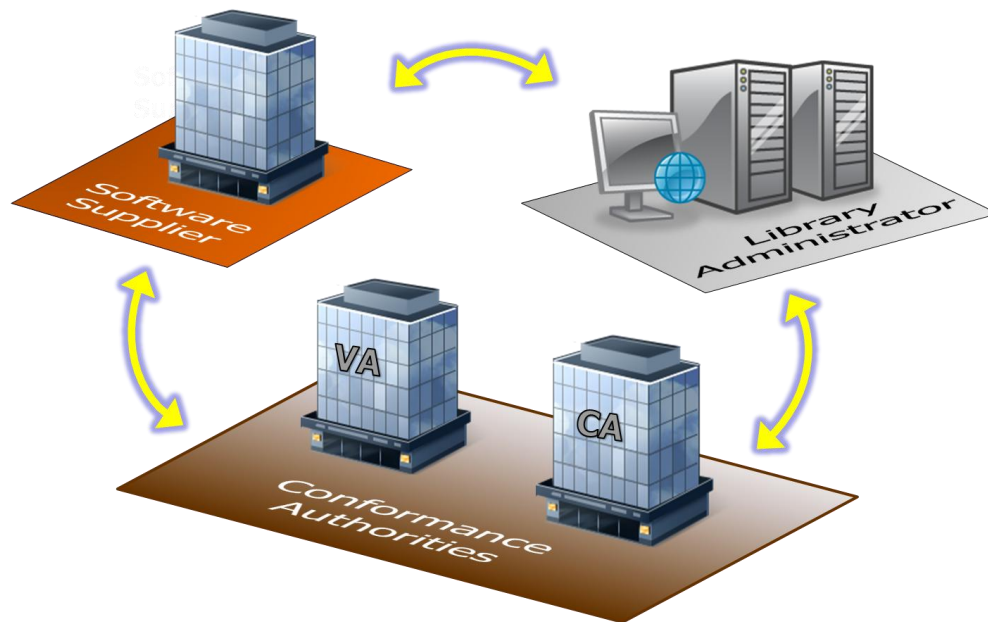
Figure 1: FACE Conformance Program OV-1

2.1   FACE Conformance Program Key Entities

The key interfacing entities involved in support of the FACE Conformance Program are as follows:

- Certification Authority (CA)
- Verification Authority (VA)
- Software Supplier
- Library Administrator (LA)

2.1.1   Certification Authority (CA)

The Certification Authority is the single entity approved by the Steering Committee that is responsible for the day-to-day operations of the FACE Conformance Program, such as assessing applications for certification, monitoring the legal agreements, and issuing the FACE Conformance Certificate.

2.1.2　　　Verification Authority (VA)

A Verification Authority is responsible for conducting For-the-Record Verification testing and assessing the Verification Evidence provided by the Software Supplier. There may be multiple VAs approved by the Steering Committee.

2.1.3　　　Software Supplier

The Software Supplier is responsible for adhering to the FACE Conformance Program, as described in this policy document, when applying for FACE Conformance Certification.

2.1.4　　　Library Administrator (LA)

The Library Administrator is a single entity responsible for managing the FACE Registry and assigning unique identifiers for all approved VAs.

2.2　　　Conformance Reference Documents

A set of Conformance Reference Documents will be available to guide Software Suppliers through the conformance verification, certification, and registration processes.

The Technical Standard contains descriptions of the architectural segments and includes a technical discussion of the Conformance Requirements for each of the segments, profiles, and standardized interfaces.

The Conformance Verification Matrix identifies the applicability, verification approach, and Verification Evidence required for each of the individual Conformance Requirements.

The FACE Conformance Policy (this document) details the processes and policies governing the FACE Conformance Program.

The FACE Conformance Certification Guide is developed from, and is intended for use in conjunction with, the FACE Conformance Policy. The Guide provides detailed instructions and assists the Software Supplier through the processes required to achieve FACE Conformance Certification for a UoC and/or UoC Package.

The legal agreements include the following:

- The Verification Agreement defines the conformance verification services to be provided by the VA and the commitment by the Software Supplier to provide the required Verification Evidence and Software Product Set. This agreement is established between the Software Supplier and an approved VA.

- The Certification Agreement defines the conformance certification services to be provided by the CA to the Software Supplier. This agreement is between the Software Supplier and the CA. The Certification Agreement also includes the requirement for the licensee to warrant and represent that the UoC meets, and will continue to meet, the applicable Conformance Requirements of a specified edition of the Technical Standard and that the Software Supplier's Statement of Conformance is correct and complete. This agreement must be completed prior to issuance of a FACE Conformance Certificate.

Figure 2 depicts the operational view (OV-2) of the FACE Conformance Program.
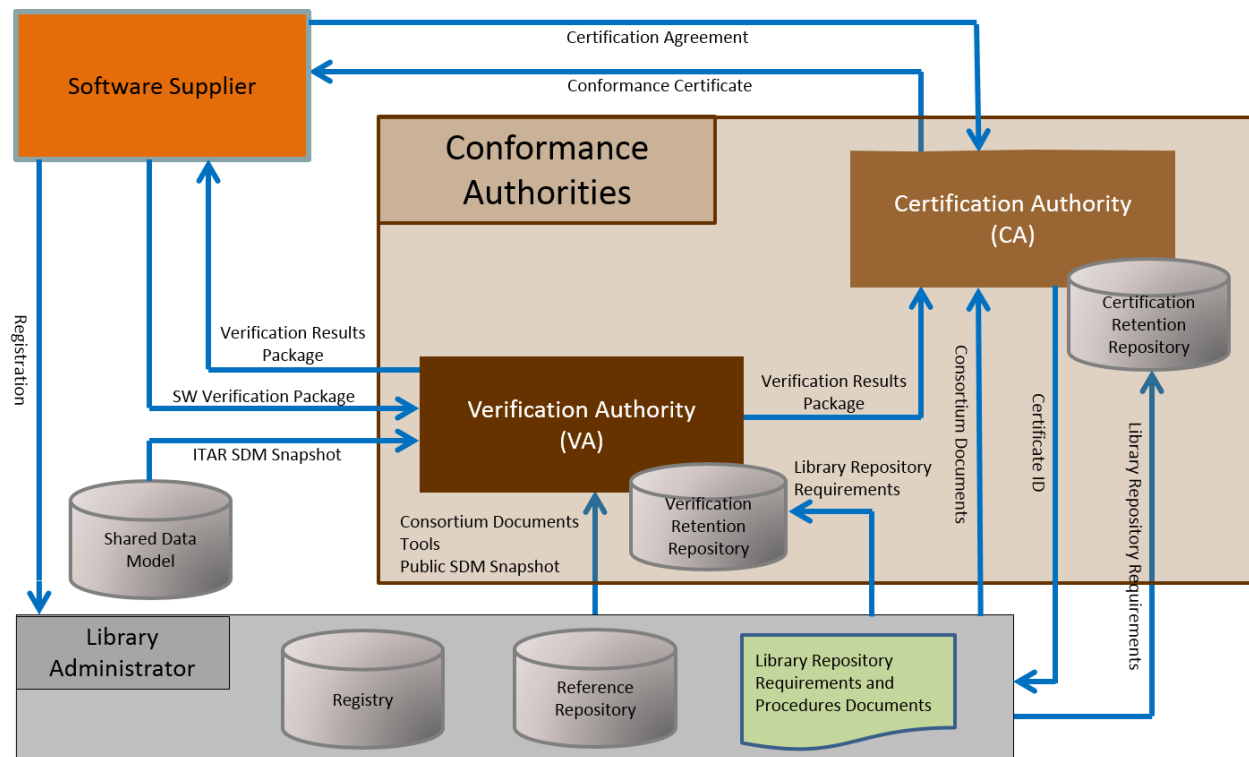
Figure 2: FACE Conformance Program OV-2

2.3 Introduction

The FACE Conformance Program contains three main functions: the *verification process,* the *certification process,* and the *registration process*.

2.3.1 Verification Process

The verification process main sub-functions are:

- Assessing the Verification Evidence provided by the Software Supplier

- Conducting the For-the-Record Verification testing to be run by, or under the direction and witness of, the VA using the approved version of the FACE Conformance Test Suite for the particular edition of the FACE Technical Standard

- Issuing the Statement of Verification by the VA

2.3.2 Certification Process

The certification process main sub-functions are:

- Evaluating the conformance certification material provided to the CA by the Software Supplier, including assessment of the Statement of Verification

- Awarding the FACE Conformance Certification by the CA to the Software Supplier

2.3.3   Registration Process

The registration process main sub-functions are:

- Initiating registration by the Software Supplier

- Submitting product description and metadata by the Software Supplier

- Ensuring the desired registry entry is a FACE Certified UoC, associated conformant variants, or UoC Package by the LA

- Posting to the FACE Registry by the LA

2.4   Entering the FACE Conformance Program

2.4.1   Preparation for Entering the FACE Conformance Program

Prior to entering the FACE Conformance Program, the Software Supplier should become familiar with the FACE Conformance Program and the requirements for FACE Conformance Certification. The Software Supplier should review the reference material listed in Section 2.2. All information and documents related to the FACE Conformance Program are available via the FACE Landing Page website to all interested parties. Initial clarification questions regarding the processes in the Guide and the requirements in the Technical Standard may be submitted via the FACE website. The responses to inquiries and questions regarding the FACE Conformance Program are managed by the FACE Consortium Project Manager.

2.4.2   Access to the FACE Conformance Program

Access to the FACE Conformance Program is via the FACE Landing Page website. The Conformance Program pages provide general information, guidance, and links to related products and documents for the FACE Conformance Program.

2.4.3   Defining UoCs and UoC Packages

Prior to entering into the FACE Conformance Program, the Software Supplier should determine how their software fits within the FACE architecture as defined in the Technical Standard. FACE Conformance Certificates are issued to conformant UoCs (including any conformant UoC Variants) or UoC Packages. In order for a UoC Package to receive a FACE Conformance Certificate, each UoC in the package must also pass the FACE Conformance Program.

The breakdown of the architecture should identify the UoCs within the software. Deployment strategies for the software may identify UoC Variants for different operating environments or optional features determined at compile-time.

During these activities the Software Supplier is able to submit discrepancies concerning the conformance verification and certification processes, related documents, and test suites using the FACE Consortium Problem Report/Change Request (PR/CR) process.

2.5   Verification Process

Figure 3 depicts the verification process of the FACE Conformance Program.
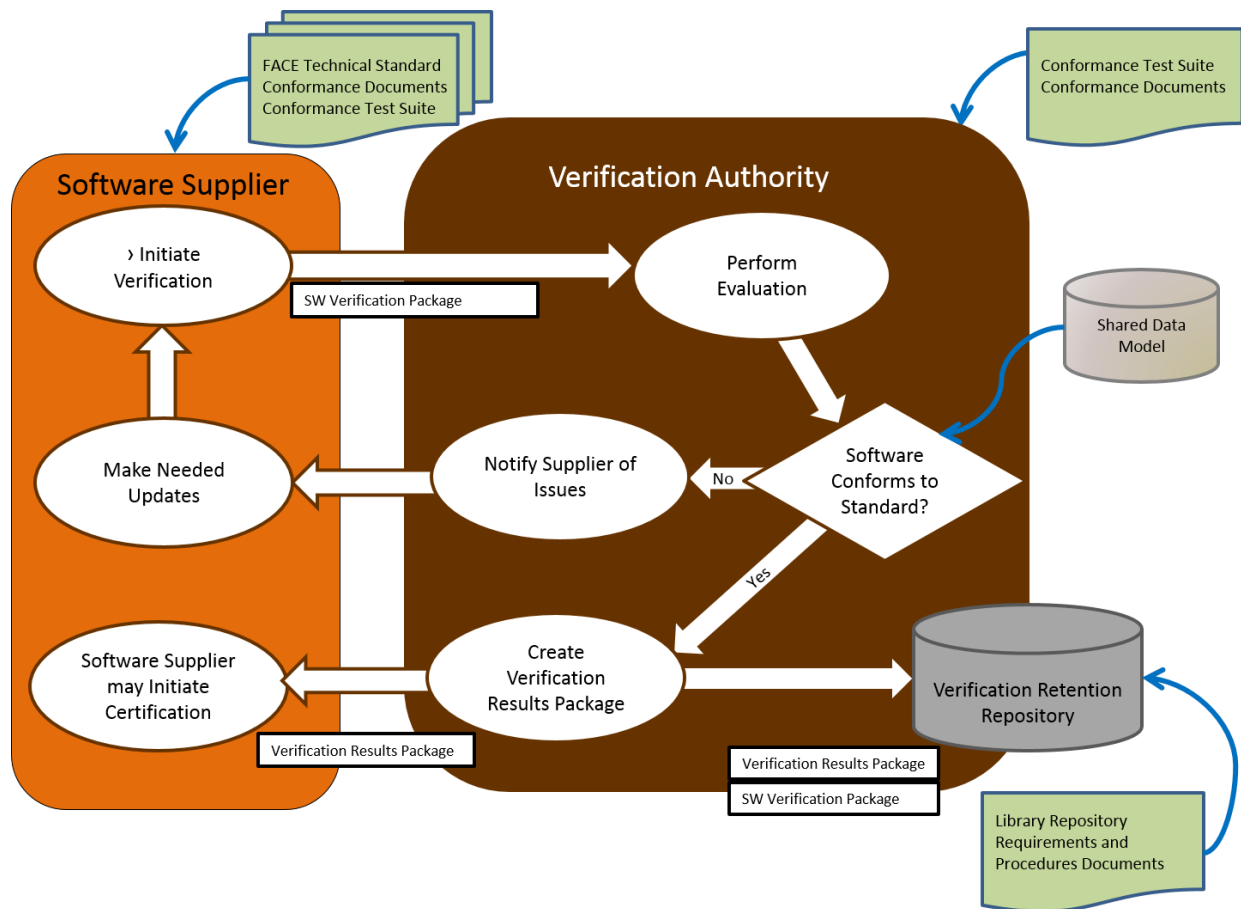
Figure 3: Verification Process

2.5.1   Preparing for Verification

The Software Supplier develops or modifies their UoC according to the Conformance Requirements defined in a specific edition of the Technical Standard. Approved versions of the FACE Conformance Test Suite(s), corresponding to specific editions of the Technical Standard, are available to Software Suppliers during development of their UoCs.

2.5.2   Establishing the Verification Agreement

The Software Supplier enters into a Verification Agreement with an approved VA. This agreement defines the conformance verification services to be provided by the VA and acceptance by the Software Supplier to provide the required Verification Evidence and Software Product Set.

2.5.3   Software Verification Package

The Software Supplier develops the Software Verification Package, consisting of the following:

- Verification Agreement
- Software Product Set
- Verification Evidence
- Software Supplier's Statement of Conformance

2.5.4   Software Product Set

A Software Product Set is submitted for each UoC. The Software Product Set contains the software deliverables that are required for executing the For-the-Record Verification testing using an approved version of the FACE Conformance Test Suite.

The Software Product Set includes object code representing all source code compiled for the test environment, appropriate data model files, associated information for set-up with interfacing segments, and minimum computer operating environment requirements.

If certification will include UoC Variants, the Software Product Set must include multiple versions of the object code. The versions of object code files must be representative of all UoC Variants for which certification is sought. The Software Product Set must include an analysis of this coverage.

2.5.5   Verification Evidence

The Verification Evidence is the supporting verification documentation required to be submitted by the Software Supplier. This provides evidence of conformance to the applicable Conformance Requirements of the Technical Standard that are not directly tested by the FACE Conformance Test Suite(s). The Verification Evidence is organized to correlate with the specific applicable Conformance Requirements and following the verification approach contained in the Conformance Verification Matrix.

If the Software Supplier is submitting a set of valid UoC Variants, the Verification Evidence must detail any differences in the applicability of the Conformance Requirements.

If the Software Supplier is submitting a valid UoC Package, Verification Evidence is submitted for each UoC that makes up the UoC Package.

2.5.6   Software Supplier's Statement of Conformance

The Software Supplier's Statement of Conformance is the Software Supplier's response to a standard questionnaire structured to obtain precise identification of the UoC and how the UoC meets the Conformance Requirements, including which segment the UoC is in and which conditional requirements are supported. The Software Supplier's Statement of Conformance includes UoC description documentation to uniquely identify and configuration-manage the UoC through the conformance verification and certification processes. The Software Supplier's Statement of Conformance identifies the specific edition of the Technical Standard against which the UoC is being evaluated, the applicable set of Conformance Requirements, the corresponding Conformance Verification Matrix version, and the version of the FACE Conformance Test Suite(s) used for verification.

If the Software Supplier is submitting UoC Variants, a Software Supplier's Statement of Conformance must detail the conformant variants and their differences.

If the Software Supplier is submitting a valid UoC Package, a Software Supplier's Statement of Conformance is submitted for each UoC that makes up the UoC Package; additionally a Software Supplier's Statement of Conformance is submitted for the UoC Package.

Once the Software Verification Package is prepared, these items are submitted to the VA. Following submission of the Software Verification Package, the VA assesses the artifacts submitted as Verification Evidence and conducts For-the-Record Verification testing on the UoC. If the UoC, or any of its variants, does not pass the verification assessment, the VA sends a notification to the Software Supplier indicating the failed verification attempt and the items that did not pass verification. Subsequent resubmissions for verification will be according to the Verification Agreement between the Software Supplier and the VA.

2.5.7   Verification Results Package

Upon successful passing of the verification assessment, the VA generates a Verification Results Package to send back to the Software Supplier. A Verification Results Package is generated for each UoC and UoC Package. The Verification Results Package includes the following:

- Software Supplier's Statement of Conformance – signed by the Software Supplier

- Statement of Verification – verification test report and approval of Verification Evidence, signed by the VA

2.5.8   Verification Retention Repository

The VA retains a copy of the Software Verification Package and the Verification Results Package for each UoC and UoC Package that successfully completes the verification process. A Verification Retention Repository is used to store these files. Access to the repository is restricted to the VA and a designated auditor. See Section 7 for auditor description.

2.6   Certification Process

Figure 4 depicts the certification process of the FACE Conformance Program.
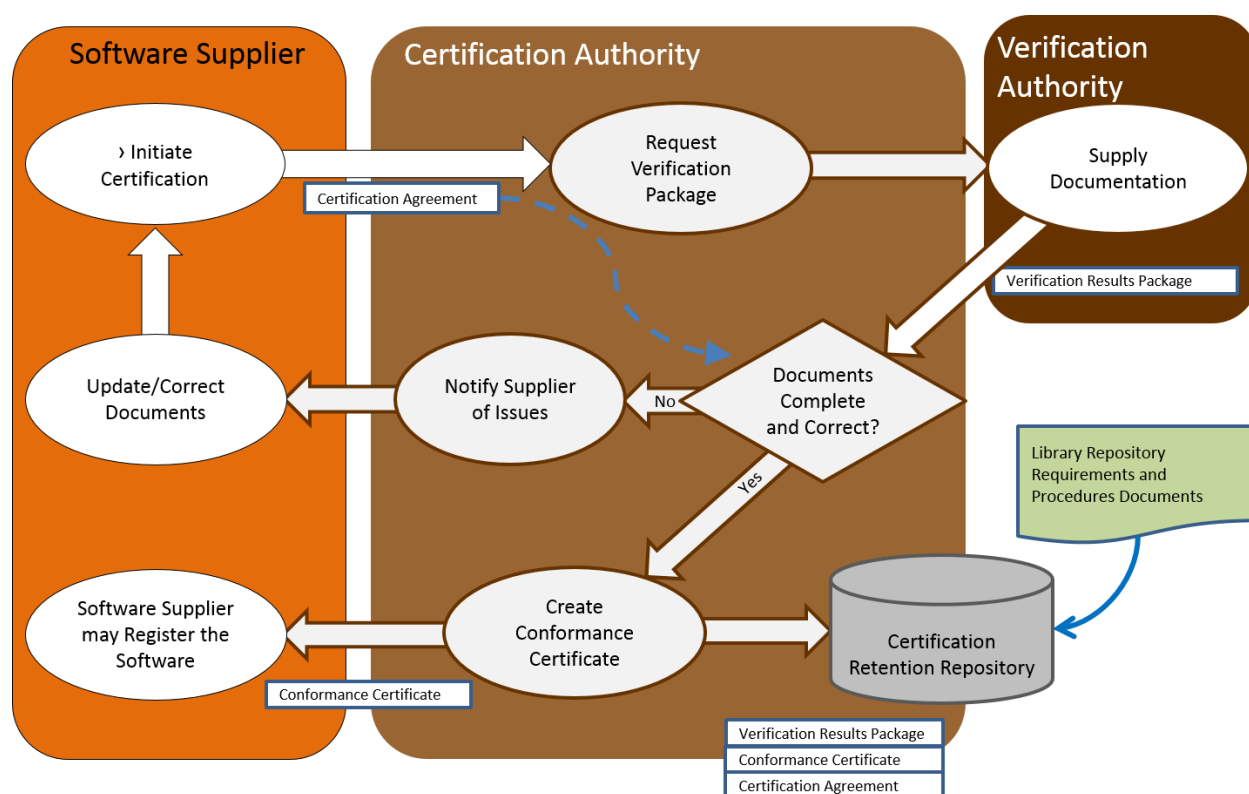
Figure 4: Certification Process

2.6.1   Initiating the Certification Process

The Software Supplier initiates the certification process by signing and submitting a Certification Agreement.

By signing the Certification Agreement, the Software Supplier warrants and represents that the FACE Certified UoC covered by this agreement meets those Conformance Requirements at the time of Conformance Certification, and after achieving Conformance Certification will meet those Conformance Requirements throughout the duration of Conformance Certification, in accordance with this policy. If, subsequent to Certification, the UoC is found not to meet the Conformance Requirements applied at the time of Conformance Certification, the CA may revoke the Conformance Certification. For the avoidance of doubt, any demonstrable shortfall with respect to the Conformance Requirements is grounds for withdrawal of Conformance Certification, whether or not that shortfall is apparent to the CA from the supporting evidence supplied by the FACE Conformance Verification and Certification process and/or the Software Supplier itself. In the event that a FACE Certified UoC ceases to qualify as a Certified UoC, the Software Supplier may apply for re-certification in accordance with Section 5 of this policy.

Upon request by the Software Supplier, the VA submits the Verification Results Package for the UoC, Valid UoC Package, and/or UoC with associated conformant variants to the CA on behalf of the Software Supplier.

2.6.2　FACE Conformance Certificate

Following submission of the legal agreements by the Software Supplier, the CA reviews the legal agreements and evaluates the Software Supplier's Verification Results Package. If the CA determines a problem with documents submitted for certification, the CA produces and provides a deficiency report to the Software Supplier. The Software Supplier may correct and resubmit the required documentation in order to continue the certification process. Upon successful evaluation by the CA of the legal agreements and the Verification Results Package for conformance, the CA issues the FACE Conformance Certificate to the Software Supplier.

Conformant UoC Variants produced from the same source code may be listed on a single Conformance Certificate. If the Software Supplier is submitting a valid UoC Package for FACE Conformance Certification, a FACE Conformance Certificate is issued to each UoC that makes up the UoC Package; additionally a FACE Conformance Certificate is issued to the UoC Package as a whole.

2.6.3　Certification Retention Repository

The CA retains a copy of the files generated during the certification process for each UoC or UoC Package that completes FACE Conformance Certification. A Certification Retention Repository is used to store these files. Access to the repository is restricted to the CA and a designated auditor.

The files for FACE Conformance Certification include the final versions of the following:

- Software Supplier's Statement of Conformance
- Statement of Verification
- FACE Conformance Certificate
- Certification Agreement

2.7 Registration Process

Figure 5 depicts the registration process.
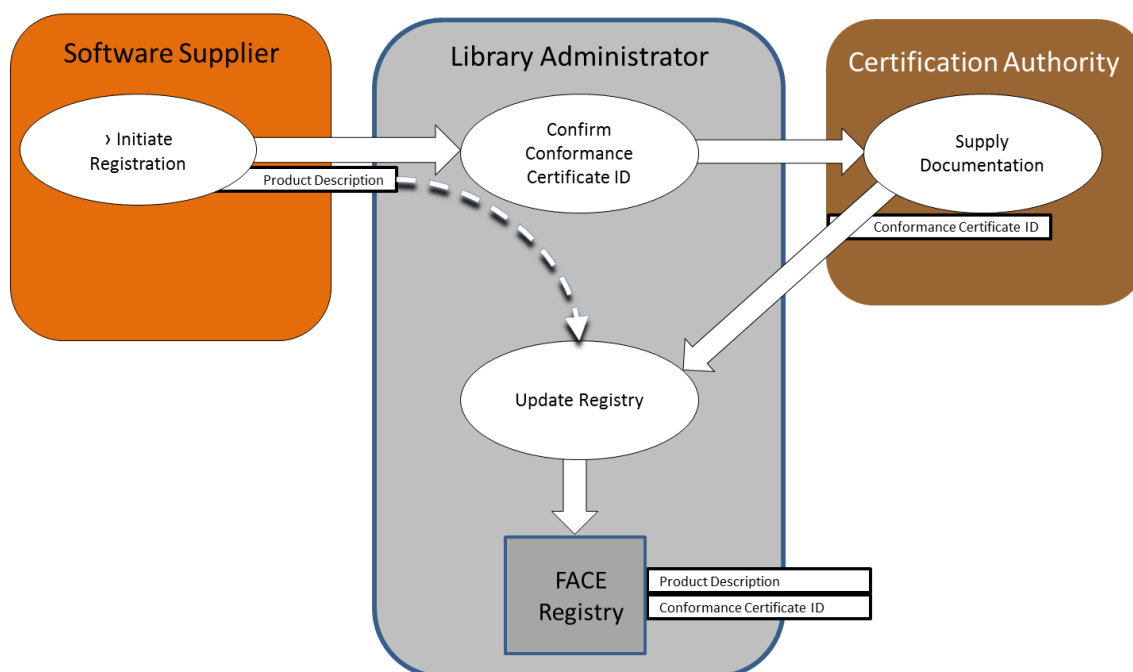
Figure 5: Registration Process

2.7.1 Registration

The Software Supplier initiates registration of a UoC, including associated conformant variants, and UoC Packages, after receiving FACE Conformance Certification. The Software Supplier sends the UoC or UoC Package description and the associated FACE Conformance Certificate ID to the LA. The LA requests confirmation of the certification from the CA. The CA responds by providing the associated FACE Conformance Certificate ID.

2.7.2 FACE Registry

The LA populates the FACE Registry with the UoC or UoC Package description, metadata, and the FACE Conformance Certificate ID. Upon registration, the Software Supplier is free to release this information.

2.7.3 Disclosure of Certification Information

Any claims of certification may only be made public after the CA has issued the FACE Conformance Certificate and the Certified UoC has been added to the Registry. In the case of a FACE Certified UoC which is not listed in the FACE Registry, the Software Supplier:

- MAY NOT make claims of UoC certification in any publicly available material, including, but not by way of limitation, marketing and publicity materials, web collaterals, trade show, or conference presentations

- MAY show (but not provide a copy of except as set forth in the bullet immediately below) the applicable FACE Conformance Certificate to a customer or potential customer as evidence of UoC Certification

- MAY provide a copy of the applicable FACE Conformance Certificate to a customer or potential customer upon request during the competitive process

3. Conformance Details

Section 2 addressed the FACE Conformance Program and the processes required to achieve FACE Conformance Certification. This section further clarifies FACE Conformance Certification.

FACE Conformance Certification is awarded to those UoCs and UoC Packages that have successfully completed the conformance verification and certification processes by meeting the applicable Conformance Requirements for certification. There are no differing levels of compliance; the UoC is either conformant or it is not.

Conformance is measured as conformance to the Technical Standard, and requirements are specified for each segment within the Technical Standard. A UoC must conform to only one FACE Reference Architecture segment. Each UoC that makes up a UoC Package must conform to only one FACE Reference Architecture segment. Additionally, each UoC must meet the requirements for the selected design FACE Profile.

The Conformance Verification Matrix (CVM) will be referenced to support verification. The CVM identifies the Conformance Requirements within the Technical Standard along with the associated verification methods. The CVM provides guidance related to the artifacts that satisfy each requirement for the applicable segment. The CVM also provides identification of the requirements that are tested by the FACE Conformance Test Suite(s).

The Software Supplier will reference the CVM to provide traceability of Verification Evidence to the applicable segment Conformance Requirements for the UoC. The Software Supplier will submit the completed traceability evidence, based on the CVM, to the VA as part of the Verification Evidence within the Software Verification Package. If the Software Supplier is submitting a UoC Package, a separate traceability document is provided for each UoC that makes up the UoC Package; additionally traceability evidence is provided for the UoC Package.

The Software Product Set comprises object code, data model (IDL for Technical Standard Edition 1.0), and test suite configuration settings. Object code (binaries) must be compiled for the test environment and represent the entirety of the UoC's source code. Object code representing any conformant UoC Variant(s) resulting from conditional compilations must be included for any desired conformance verification. Refer to the Test Suite Users Guide for elaboration on how the Technical Standard requirements impact typical compiler settings.

4. Configuration Management of Documents and Products

4.1 Conformance References

The FACE Consortium is responsible for configuration management of all published editions of the FACE Technical Standard, the associated CVM and approved Conformance Test Suite(s), along with other associated conformance forms and documents described in this document.

4.2 Certified UoCs and UoC Packages

The Software Supplier is responsible for configuration management of each Certified UoC and Certified UoC Package. Configuration management includes storage in a product repository as defined in the FACE Library Policy, assigning a unique part number to each Certified UoC and/or Certified UoC Package, and annotating this number on the associated Software Supplier's Statement of Conformance. A copy of the Software Verification Package for each Certified UoC and Certified UoC Package will be retained by the Software Supplier.

4.3 For-the-Record Testing

The VA is responsible for inspecting and documenting the laboratory configuration, including hardware, software, and test suite used during For-the-Record testing, whether conducting or witnessing the For-the-Record testing. This will be documented on the Statement of Verification for the associated UoC and/or UoC Package.

4.4 Verification Retention Repository

Each VA is responsible for maintaining a Verification Retention Repository in accordance with the FACE Library Policy.

4.5 Certification Retention Repository

The CA is responsible for maintaining a Certification Retention Repository in accordance with the FACE Library Policy.

5.   Maintaining Certification

A FACE Certified UoC will maintain certification as long as the UoC remains the same as defined by the Software Supplier's Statement of Conformance providing all legal agreements continue to be met. If any UoC(s) comprising a Certified UoC Package lose(s) certification, the associated UoC Package also loses certification. The following subsections apply if changes to a FACE Certified UoC occur.

5.1   Modifications of a FACE Certified UoC

FACE Conformance Certification applies to a single instance of a UoC as defined in the Software Supplier's Statement of Conformance and warranted by the Certification Agreement. This section defines the requirements for maintaining certification when modifying a FACE Certified UoC and for achieving certification for a new UoC that is based on or derived from a FACE Certified UoC. A delta verification is a reduced verification effort deemed sufficient by an approved VA.

Table 2 summarizes the types of modifications along with the verification and certification requirements.

Table 2: Types of Modifications to FACE Certified UoCs

Section	Type of Modification	Verification Requirement	Certification Requirement
5.1.1	Conformance maintenance release	Delta-verification	Certification information update
5.1.2	Software modification release	Delta-verification	New certification
5.1.3	Renamed UoC	None	Certification information update
5.1.4	Modification of FACE Registry information	None	None; registry information update
5.1.5	Other modifications	As determined by the VA	As determined by the CA

5.1.1   Conformance Maintenance Release

Conformance maintenance releases are the result of modifications made to the UoC because of conformance-related issues that arise following FACE Conformance Certification; for example, conformance-related problems that arise during system-level test and evaluation or later during the porting of the UoC. Regardless of whether the problem was due to an improper implementation of a Conformance Requirement or a discrepancy in the Technical Standard, the problem solution required a modification to the UoC.

The Software Supplier will provide an assessment report of the impacts resulting from the modification to the Software Verification Package and resubmit the Software Verification Package with the changes incorporated. The VA will conduct an assessment on the report and updated submittal, determine whether further information or testing is required, evaluate any additional data or test results, and upon satisfactory results issue a delta-verification assessment report to the CA.

The CA will re-issue the FACE Conformance Certificate.

5.1.2 Software Modification Release

Software modification releases are the result of any software changes made to the UoC not associated with a conformance maintenance release. The requirement for change could be due to Software Supplier market assessment or customer demand.

For these changes, the Software Supplier must submit an impact report on the change(s) and submit a new Software Verification Package. The VA will determine the level of verification required.

Upon successful conformance verification, the process will follow the certification process for new UoCs.

5.1.3 Renamed UoC

If a FACE Certified UoC is to be renamed, with no change to the UoC, the Software Supplier may request such changes at any time by contacting the CA. The Software Supplier will be required to affirm to the CA that there has been no change other than name. Renaming a UoC will additionally require an update of FACE Registry information in accordance with Section 5.1.4.

5.1.4 Modification of FACE Registry Information

If the Software Supplier wishes to modify information in the FACE Registry that has no impact on the conformance of the FACE Certified UoC – such as contacts, UoC descriptive text, or other metadata – the Software Supplier may request such changes at any time by contacting the LA.

5.1.5 Other Modifications

Except where specifically stated in this document, any other modification of a FACE Certified UoC which is deemed by the CA to have a material effect on the conformance of the UoC to the Technical Standard constitutes a new UoC, which will be subject to the full conformance verification and certification processes.

5.2 Removal of Certification

A UoC shall cease to be a FACE Certified UoC if:

- The version of the UoC that was certified is no longer available or supported by the Software Supplier.

- The Software Supplier fails to adhere to any of the conditions of the signed legal agreements.

- A UoC is shown to be non-conformant and procedures in Section 5.1 are not applied in a timely manner.

- A UoC does not match what was originally certified.

If a FACE Certified UoC ceases to be certified, the Software Supplier may no longer make any claim of FACE Conformance Certification in relation to that UoC. The Software Supplier, at its own expense, shall remove any existing claim of FACE Conformance Certification from all subsequent production of that formerly FACE Certified UoC and from all sales or promotional literature and other materials related to that UoC. The CA may inspect any formerly FACE Certified UoC, literature, or other materials to ensure adequate removal.

Once a UoC ceases to be a FACE Certified UoC, any future claim of certification in relation to that UoC will require re-certification in advance of such claim.

If a UoC ceases to be certified, the CA will direct that it be removed from the FACE Registry.

6.   FACE Conformance Test Suite(s)

The FACE Conformance Test Suite(s) will be developed and maintained using a software development lifecycle that includes the formal testing of conformance test suite functionality. All approved versions of the FACE Conformance Test Suite(s) will be configuration managed by the Conformance Tools Configuration Control Board (CCB) to ensure version control and version history of the conformance test suite used for each of the UoCs going through FACE Conformance Certification.

The version of the conformance test suite used for FACE Conformance of a UoC will be established between the Software Supplier and the VA within the Verification Agreement. Approved versions of the FACE Conformance Test Suite(s) will be made available to all interested users through the FACE Landing Page website.

Details regarding the Conformance Tools CCB may be found in the FACE Consortium Problem Report/Change Request (PR/CR) process and the Conformance Tools Acceptance Plan.

7.   Audit

The primary purpose of the audit is to ensure the overall integrity of the FACE Conformance Program and the software contained in FACE Product Repositories. An audit may be conducted on a Software Supplier, a VA, or the CA.

An audit of a Software Supplier can be to verify the supplier adherence to FACE Library Retention Repository requirements or to verify that a UoC offered by the Software Supplier continues to be the identical UoC that was certified as a FACE Certified UoC. As described in Section 5.1, any modified UoC is required to go through a process to determine the extent of the verification activities required to achieve FACE Conformance Certification for the modified UoC. Any modified UoCs that successfully pass the conformance verification and certification processes will receive a unique FACE Conformance Certification for that modified UoC version. Audits may be conducted on any UoC version.

Additionally, audits may be performed on the VA and CA to ensure adherence to the FACE Conformance Policy and the authorities guidelines detailed in the Conformance Authorities Plan.

The process for the UoC audit is shown in Figure 6.

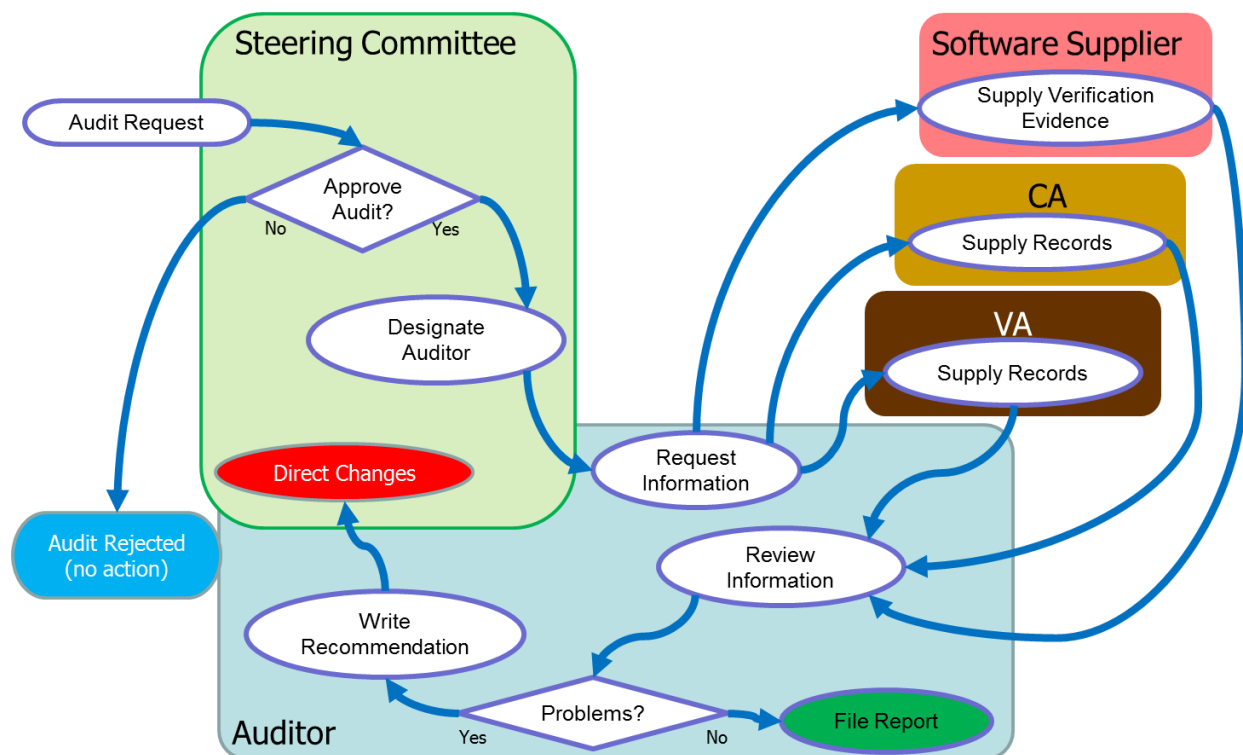**Figure 6: FACE Conformance Program Audit Process**

Audits will be conducted or directed by the Steering Committee when deemed necessary. The Steering Committee designates an auditor to perform an audit. The auditor may request the applicable information from any of the following entities in order to conduct the audit:

- Software Supplier – Verification Package and configuration-managed records

- VA – verification records

- CA – certification records

7.1   UoC Audits

The Software Supplier is subject to audit of the actual UoC to ensure that the UoC remains the same as previously certified. The auditor may request the Software Supplier to supply configuration-managed records for a UoC, the UoC itself, and contents of the Verification Package for review. If they do not match what was originally delivered to the VA, the Software Supplier will be requested to provide internal auditing to explain the differences, resubmit for FACE Conformance Certification, or risk losing the FACE Conformance Certificate for the UoC.

The VA and/or CA must also support audits of UoCs by submitting verification and/or certification records requested by the auditor.

The auditor will use the information provided by the Software Supplier, VA, and CA to evaluate the UoC against the initial request for audit to determine whether or not there is a problem. If no problem is found, the auditor will generate and issue a report regarding the audit. If a problem is identified during the audit, the auditor will generate a report recommending to the Steering Committee how to resolve the problem. The Steering Committee will direct any changes resulting from the audit.

8. Problem Reporting Process

A Problem Report (PR) may be submitted against any problem encountered with the Technical Standard, FACE Conformance Test Suite(s), or conformance verification and certification processes that inhibit or will inhibit the conformance effort. The PR submitter will utilize the FACE Consortium Problem Report/Change Request (PR/CR) process. The FACE Consortium is responsible for implementing a PR/CR process that supports conformance-related problem reporting, ensures submitter anonymity, and provides for Approved Corrections in order to expeditiously address any valid problem(s) identified with conformance processes, policy, test suite(s), or the Technical Standard which may cause undue delay in executing conformance certification. The types of problems that may be reported include:

- Errors, conflicts, or ambiguities in the Technical Standard.

- Errors in the test suite(s) used to assess conformance with the specifications; specifically, in the FACE Conformance Test Suite(s), or other test suites referenced by the FACE Conformance Program (if any). Errors, conflicts, or ambiguities in the set-up requirements of the FACE Conformance Test Suite(s) may also be addressed through PRs.

- Errors, conflicts, or ambiguities in the conformance verification and certification processes; specifically, those related to the registration process, legal agreements, and completion of the Software Verification Package.

Approved Corrections apply to a specific Technical Standard edition, test suite version, conformance policy, or process. A listing of all Approved Corrections will be maintained on the FACE Landing Page, may be referenced for use in any related conformance verification effort, and remain in effect until the associated FACE product is no longer valid.

A submitter may file PRs to address issues that arise for any of these items. The identity of the submitter will be protected throughout this process. The PR is used specifically for the types of errors listed above which are inhibiting the conformance effort. For general questions on the conformance verification and certification processes, running the test suites, or other problems not covered above, the FACE Consortium Program Manager can provide information on obtaining further assistance. Issues not resolved through this assistance may be followed up with a PR.

Figure 7 provides an overview of the Problem Reporting process.

Figure 7: FACE Conformance Program Problem Reporting Process

The Problem Reporting process will allow the submitter to remain anonymous, so that pre-certification activity is kept entirely confidential and vendor-neutral.

8.1   FACE Problem Reporting Process

8.1.1   FACE Triage Group (FTG)

The FACE Triage Group is a collection of individuals that performs an initial review of all tickets as they are entered. A FACE Triage Group member can route the ticket back to the submitter or pass it on to one of several Product Configuration Control Boards (CCBs) for further investigation.

8.1.2   Product Configuration Control Boards (CCBs)

FACE Product CCBs are responsible for specific products including the Technical Standard, conformance policy, and other FACE products. PRs will be assigned to the appropriate Product CCB for action and resolution in the form of Approved Corrections.

8.1.3   FACE Configuration Control Board (FACE CCB)

The FACE CCB will evaluate and resolve a PR, depending on the type of problem reported. The Product CCB will submit the proposal for an Approved Correction to the FACE CCB.

More detailed information regarding Problem Reporting is addressed in the Consortium Problem Report/Change Request (PR/CR) process.

8.1.4　　　Problem Report and Approved Correction Timeline

The assigned CCB will perform its initial assessment as soon as practicable, with the goal within 15 calendar days of the submission. This initial response allows simple problems to be dealt with expeditiously. A detailed review will be undertaken for issues that are more complicated, or when the preliminary review does not resolve the issue. Final resolution will be provided as soon as practicable, with the goal within an additional 30 calendar days. In most cases, 45 calendar days are sufficient to provide a final resolution. However, in exceptional circumstances, final resolution may take longer. In such cases, the PR/CR Administrator will notify the submitter prior to the 45th day, of the delay and provide a preliminary resolution, if available.

9.   Appeals Process

Occasions that may give rise to an appeal include, but are not limited to, the following:

- The Software Supplier disagrees with the resolution of a PR.

- The Software Supplier disagrees with the CA's grounds for denying the award of certification.

- The Software Supplier of a FACE Certified UoC disagrees with a formal notification from the CA of the need to rectify a non-conformance or the removal of certification. The incidence of a UoC having been found to be non-conformant will be handled on a case-by-case basis under Conformance Maintenance Release policies.

Appeal requests will be made to the Steering Committee in writing. Figure 8 provides an overview of the Appeals process.
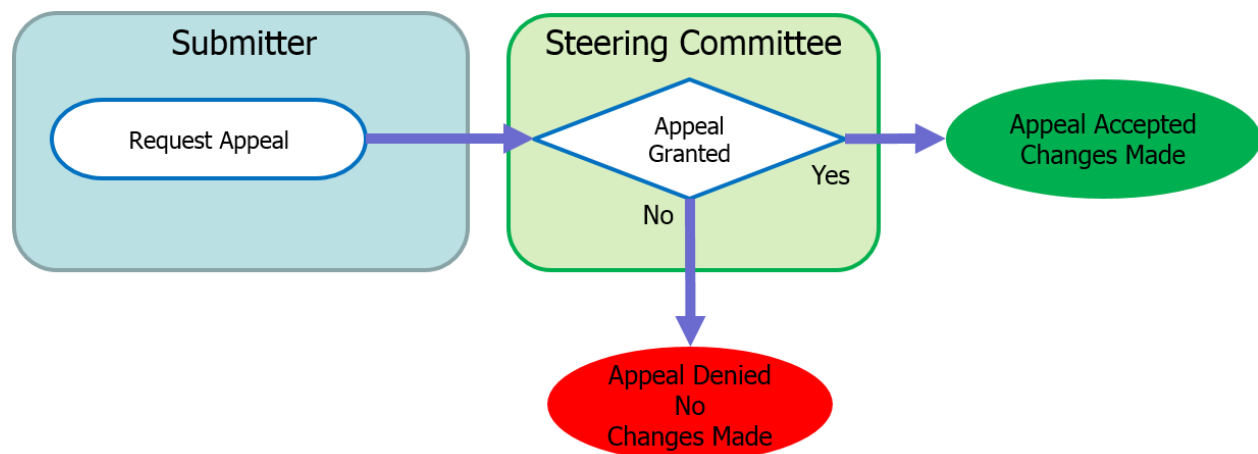

Figure 8: FACE Conformance Program Appeals Process

The Steering Committee may ask for technical reports from the relevant working groups and may also ask for reports from independent experts. Appeals must be requested within 90 calendar days of issue occasion. The Steering Committee Review will be completed within 30 calendar days of the submitter's written request. The results of a Steering Committee Review are final and cannot be further appealed.

10. Confidentiality and Disclosure

10.1 Confidentiality

All information relating to a Software Supplier and the UoC to be certified will be held confidential during the conformance verification and certification processes, as well as throughout the PR/CR process. The test results will always be confidential and cannot be released without the Software Supplier's authorization. The VA will always hold confidential any information regarding unsuccessful requests for verification. The only information disclosed is the FACE Certified UoC information provided to the FACE Registry.

10.2 Disclosure of Information

FACE Conformance Certification information to be disclosed by the FACE Conformance Program consists of the notification that certification was achieved and the signed FACE Conformance Certificate. This information will be provided to the Software Supplier in a confidential manner. The Software Supplier may, at a time of their choice, provide this information and other Software Supplier and UoC material to the FACE Registry as described in Section 2.7.2.

Acknowledgements

Referenced Documents

The following referenced documents provide the requirements for which this Conformance Policy applies. The latest edition of this policy is meant to apply to all editions of these documents.

- The Technical Standard for Future Airborne Capability Environment

The following referenced documents provide guidance to the technical requirements and their application to the conformance program. The edition of these documents should correspond to the edition of the Technical Standard used.

- The Conformance Verification Matrix (CVM)
- The Reference Implementation Guide (RIG) for the FACE Technical Standard

The following referenced documents provide additional guidance on producing FACE Certified software. The latest edition of these referenced documents (including any amendments) applies.

- The FACE Conformance Certification Guide
- The Matrix Users Guide (MUG)
- FACE Contract Guide
- FACE Problem Report/Change Request (PR/CR) Process