# DTV APPLICATION SOFTWARE ENVIRONMENT LEVEL 1 (DASE-1) PART 8: CONFORMANCE

# ATSC Standard

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# DASE-1 Conformance

**ATSC Standard**

## 1.        SCOPE

### 1.1        *Status*

*This section describes the status of this document at the time of its publication. Other documents may supersede this document. The latest status of this document series is maintained by the ATSC.*

This specification is an ATSC Standard, having passed ATSC Member Ballot on September 16, 2002. This document is an editorial revision of the Approved Proposed Standard (PS/100-8) dated November 5, 2002.

The ATSC believes that this specification is stable, that it has been substantially demonstrated in independent implementations, and that it defines criteria that are necessary for effective implementation and interoperability of Advanced Television Systems. A list of cumulative changes made to this specification may be found at the end of this document.

A list of current ATSC Standards and other technical documents can be found at http://www.atsc.org/standards.html.

### 1.2        *Purpose*

This specification defines conformance as pertains to DASE Applications and DASE Systems.[1]

### 1.3        *Application*

The behavior and facilities of this specification are intended to apply to terrestrial (over-the-air) broadcast systems and receivers. In addition, the same behavior and facilities may be applied to other transport systems (such as cable or satellite).

### 1.4        *Organization*

This specification is organized as follows:

- Section 1    Describes purpose, application and organization of this specification
- Section 2    Enumerates normative and informative references
- Section 3    Defines acronyms, terminology, and conventions
- Section 4    Specifies conformance model
- Changes    Cumulative changes to specification

This specification makes use of certain notational devices to provide valuable informative and explanatory information in the context of normative and, occasionally, informative sections.

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[1] The user's attention is called to the possibility that compliance with this standard may require use of an invention covered by patent rights. By publication of this standard, no position is taken with respect to the validity of this claim or of any patent rights in connection therewith. One or more patent holders have, however, filed a statement regarding the terms on which such patent holder(s) may be willing to grant a license under these rights to individuals or entities desiring to obtain such a license. Details may be obtained from the ATSC Secretary and the patent holder. (This note was editorially updated on 11 June 2008.)

These devices take the form of paragraphs labeled as *Example* or *Note*. In each of these cases, the material is to be considered informative in nature.

## 2.        REFERENCES

This section defines the normative and informative references employed by this specification. With the exception of Section 2.1, this section and its subsections are informative; in contrast, Section 2.1 is normative.

### *2.1        Normative References*

The following documents contain provisions which, through reference in this specification, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All referenced documents are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent edition of the referenced document.

When a conflict exists between this specification and a referenced document, this specification takes precedence.

> *Note:* This specification uses a reference notation based on acronyms or convenient labels for identifying a reference (as opposed to using numbers).

[DASE]

   DASE-1 Part 1: Introduction, Architecture, and Common Facilities, A/100-1, ATSC

[DASE-ARM]

   DASE-1 Part 7: Application Delivery System – ARM Binding, A/100-7, ATSC

[DASE-SECURITY]

   DASE-1 Part 6: Security, A/100-6, ATSC

### *2.2        Informative References*

None specified.

### *2.3        Reference Acquisition*

ATSC Standards

   Advanced Television Systems Committee (ATSC), 1750 K Street N.W., Suite 1200 Washington, DC 20006 USA; Phone: +1 202 828 3130; Fax: +1 202 828 3131; http://www.atsc.org/.

## 3.            DEFINITIONS

This section defines conformance keywords, acronyms and abbreviations, and terms as employed by this specification.

All acronyms, abbreviations, and terms defined by [DASE] apply to this specification. Only those acronyms, abbreviations, and terms specific to this document and not common to DASE in its entirety are defined herein.

### 3.1            *Conformance Keywords*

As used in this document, the conformance keyword *shall* denotes a mandatory provision of the standard. The keyword *should* denotes a provision that is recommended but not mandatory. The keyword *may* denotes a feature whose presence does not preclude compliance, that may or may not be present at the option of the DASE Application or the DASE System implementer.

### 3.2            *Acronyms and Abbreviations*

None defined.

### 3.3            *Terms*

**application-defined facility**: a facility defined by a DASE Application.

**candidate specification**: a specification under scrutiny or consideration for some purpose.

> *Note:* In this document, the candidate specification is understood to be the DASE Standard.

**certification**: the process of granting a certificate of compliance to a compliant application or a compliant system; in general, such a process is a legal or a business related process, not a technical process.

**compliant application**: an application which has undergone compliance testing and has been determined to be in compliance with a conformance statement which applies to a candidate specification.

> *Note:* In this document, the application is understood to be a DASE Application and the candidate specification is understood to be the DASE Standard.

**compliant system**: a system which has undergone compliance testing and has been determined to be in compliance with a conformance statement which applies to a candidate specification.

> *Note:* In this document, the system is understood to be a DASE System and the candidate specification is understood to be the DASE Standard.

**compliant**: the state of having satisfied a compliance testing process.

**compliance testing**: the process of determining that an application or system complies (is in compliance) with a conformance statement which applies to a candidate specification.

**conformance**: a specification of a conformance statement.

**conformance statement**: a set of assertions which defines adherence to a candidate specification.

**conformance criteria**: the individual assertions that compose a conformance statement.

**extension facility**: a facility defined by a standardized extension to the DASE Standard.

**implementation-defined facility**: a facility defined by an implementer of a DASE System.

**non-compliant**: the state of having failed a compliance testing process.

**rely (up)on**: a formulaic expression used throughout the DASE Standard to indicate the level of expectation which a DASE Application may have regarding the behavior of a DASE System; the expression *shall not rely (up)on* indicates that no expectation of behavior may be assumed.

**standard facility**: a facility defined by the DASE Standard.

**strictly compliant application**: a compliant application that makes use of only standard and application-defined facilities.

## 4.         CONFORMANCE MODEL

This section specifies a model for the definition of conformance, the determination of compliance, and the generation of a certificate of compliance.

Implementers of a DASE Application or a DASE System shall employ a model which follows or is equivalent to the flowchart shown in Figure 1 Conformance Model Flowchart for the purpose of making statements or assertions regarding the compliance of a DASE Application or a DASE System.
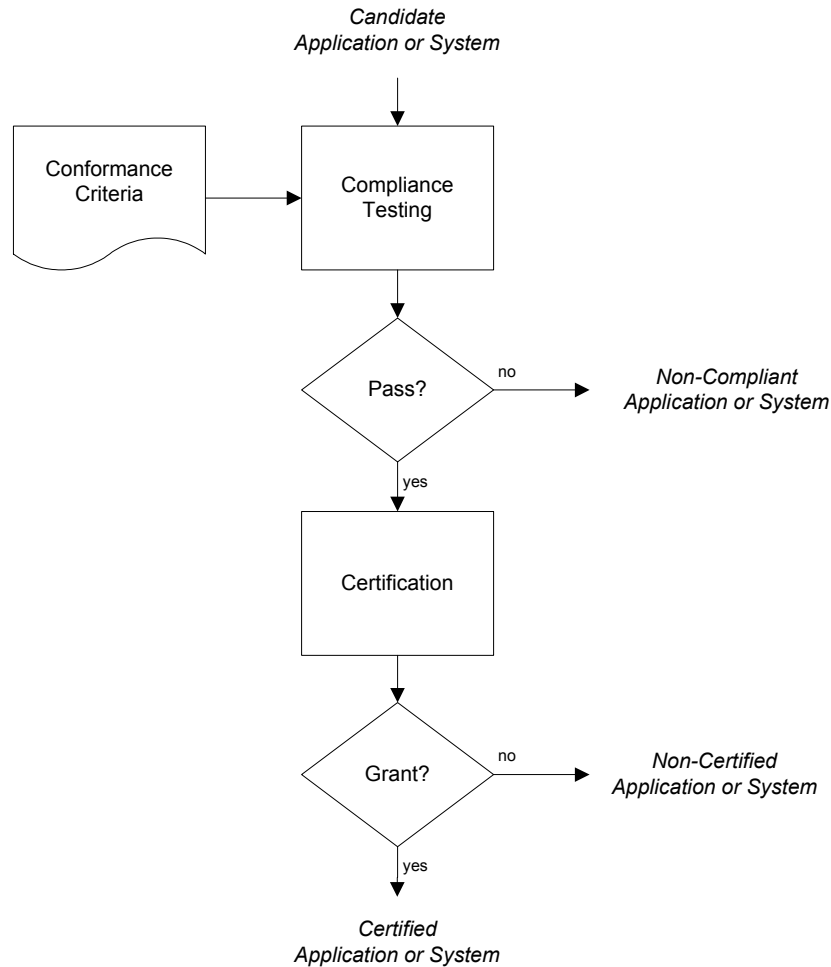
**Figure 1 Conformance Model Flowchart**

The following subsections define conformance, compliance testing, and certification as pertains to this model and the use of this model.

> *Note:* The precise details of how this model is used in practice are not specified by the DASE Standard, but may be further specified by other ATSC or industry standards.

### *4.1         Conformance*

This section specifies the conformance criteria which collectively define the terms of adherence to the DASE Standard.

### 4.1.1        DASE Application Conformance Criteria

A DASE-1 Application shall designate its required level to be 1 (one).

*Note:* See [DASE], Section 6.1.1.6.4.1.5.1, for more information on the designation of an application's required level.

The facilities permitted by the DASE Standard are referred to as *standard facilities*. Facilities defined by an application are referred to as *application-defined facilities*. All other facilities are referred to as *implementation-defined facilities*, and are provided by an implementer of a DASE System.

A DASE Application may use standard facilities, application-defined facilities, extension facilities, and implementation-defined facilities.

A DASE Application that makes use of only standard and application-defined facilities is designated as a *strictly compliant* DASE Application.

A DASE Application that makes use of an extension facility shall not be designated as *strictly compliant*. A DASE Application may rely on the presence of an extension facility if and only if it specifies a *required* extension capability, using the mechanisms prescribed by [DASE], Section 6.1.1.6.4.1.2.

A DASE Application that makes use of an implementation-defined facility shall not be designated as *strictly compliant*. A DASE Application shall not rely on the presence of any implementation-defined facility.

*Note:* A DASE Application which is not strictly compliant may use an implementation-defined facility by making use of an appropriate conditionalization mechanism.

A DASE Application that makes use of any standard facility shall satisfy all well-formedness, validity, and semantic constraints which apply to the facility.

A DASE Application that fails to adhere to the above criteria may fail to be initialized or may be aborted by a DASE System.

### 4.1.2        DASE System Conformance Criteria

A DASE-1 System shall designate its level to be 1 (one).

A DASE System shall fully support all mandatory facilities defined by [DASE] and [DASE-SECURITY]. In addition, if a DASE System supports the delivery of a DASE Application by an ATSC compliant transport stream, then the DASE System shall support all mandatory features defined by [DASE-ARM].

The facilities which consist of those content types specified by [DASE], Table 15, shall be considered mandatory facilities.

*Note:* Mandatory support for the facilities of the content types specified by [DASE], Table 15, is equivalent to a requirement to support both declarative and procedural application environments and the content types they service.

A DASE System fully supports a facility if and only if it implements all features that are designated to be mandatory by the facility definition. In addition, a DASE System should strive to support all features that are designated to be recommended by the facility definition.

A DASE System shall be capable of processing a strictly compliant DASE Application.

If a DASE System exposes an implementation-defined facility to a DASE Application, then any use of that facility shall not cause the DASE System to behave in such a manner as to circumvent any mandatory behavior prescribed by the DASE Standard.

### *4.2        Compliance Testing*

This specification does not prescribe a compliance testing process.

*Note:* A compliance testing process may be further specified by other ATSC or industry activities.

### *4.3        Certification*

This specification does not prescribe a certification process.

*Note:* A certification process may be further specified by other ATSC or industry activities.

**CHANGES**

This section is informative.

*Changes from Candidate Standard to Standard*

The following table enumerates the changes between the issuance of the candidate standard edition of this specification and the standard edition.

**Table 1 Changes from Candidate Standard**

| Section | Description |
|---------|-------------|
| 1 | Change status to standard. |
| 3.3 | Add *extension factility* term. |
| 4.1.1 | Add language describing conditional reliance upon extension facility. |