



***Society of Cable  
Telecommunications  
Engineers***

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**ENGINEERING COMMITTEE  
Digital Video Subcommittee**

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**AMERICAN NATIONAL STANDARD**

**ANSI/SCTE 118-3 2006**

**Program-Specific Ad Insertion -  
Traffic System to Ad Insertion System  
File Format Specification**

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## **1.0 SCOPE**

This document defines the information that shall be passed from an Affiliate's Traffic system to an Affiliate's Ad Insertion System for communications of ad insertion schedules, including Unique Program Identifiers where specified. It specifies the required data for Multi-Tiered, Program Specific Insertion, as well as the file format for the data communications.

This document only describes digital ad insertion with SCTE 35 cue messages.

## **2.0 NORMATIVE REFERENCES**

The following documents contain provisions, which, through reference in this text, constitute provisions of this standard. At the time of subcommittee approval, the editions indicated were valid. All standards are subject to revision, and parties to agreement based on this standard are encouraged to investigate the possibility of applying the most recent editions of the documents listed below.

### **2.1 SCTE References**

1. SCTE 35 2004 – Digital Program Insertion Cueing Message for Cable
2. SCTE 67 2002 – Digital Program Insertion Cueing Message for Cable – Interpretation for SCTE 35 2001
3. DVS 631r1 Program-Specific Ad Insertion - Content Provider to Traffic Communication Applications Data Model
4. DVS 639r1 Program-Specific Ad Insertion - Data Field Definitions, Functional Overview and Application Guidelines
5. ISO 8601 2004 - Data elements and interchange formats -- Information interchange -- Representation of dates and times

### **2.2 Standards from other Organizations**

## **3.0 INFORMATIVE REFERENCES**

The following documents may provide valuable information to the reader but are not required when complying with this standard.

- 3.1 SCTE References
- 3.2 Standards from other Organizations
- 3.3 Published Materials

#### 4.0 COMPLIANCE NOTATION

|              |                                                                                                                                                                                                                                                                                   |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| “SHALL”      | This word or the adjective “REQUIRED” means that the item is an absolute requirement of this specification.                                                                                                                                                                       |
| “SHALL NOT”  | This phrase means that the item is an absolute prohibition of this specification.                                                                                                                                                                                                 |
| “SHOULD”     | This word or the adjective “RECOMMENDED” means that there may exist valid reasons in particular circumstances to ignore this item, but the full implications should be understood and the case carefully weighed before choosing a different course.                              |
| “SHOULD NOT” | This phrase means that there may exist valid reasons in particular circumstances when the listed behavior is acceptable or even useful, but the full implications should be understood and the case carefully weighed before implementing any behavior described with this label. |
| “MAY”        | This word or the adjective “OPTIONAL” means that this item is truly optional. One vendor may choose to include the item because a particular marketplace requires it or because it enhances the product, for example; another vendor may omit the same item.                      |

#### 5.0 DEFINITIONS AND ACRONYMS

The following terms are used in this document:

|                     |                                                                                                                                                                                                                                                                                          |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ad Insertion System | A complete hardware and software solution that interprets the schedule file, streams content when triggered based on the schedule file, logs insertion results, and returns a verification file to the Traffic and Billing system.                                                       |
| Avail               | An avail is an opportunity provided by the network to a local affiliate to insert a commercial event into a program. The start of an avail is indicated as a splice event in the programming stream. The duration of the avail may vary from a few seconds to several minutes. (SCTE 67) |
| Break               | A break is an opportunity for local insertion to occur within a broadcast program. In a sales context, a break is divided into sellable units (avails). In an insertion context, a break is divisible into individual insertion events (slots).                                          |
| Broadcast Day       | The nominally 24 hour period which is logically thought of as a day for a broadcaster or MSO. When it does not align with a calendar date, it will typically begin in the early morning and span across midnight.                                                                        |

|                                    |                                                                                                                                                                                          |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Business Day                       | For the MSO's traffic and billing system, this is the calendar date that contains the start of the Broadcast Day.                                                                        |
| Calendar Day                       | The actual, Gregorian calendar day on which an event takes place. A broadcaster or MSO may define their broadcast day as representing events that span 2 separate calendar days.         |
| Cue Message                        | An SCTE 35 Cue Message.                                                                                                                                                                  |
| Event Based Format                 | Defined by setting up a window time and assigning avails that float within that window.                                                                                                  |
| MSO                                | acronym for Multi-System Operator.                                                                                                                                                       |
| Network                            | A cable, satellite, or digital terrestrial content delivery network such as CNN, ESPN, etc. It can also include an MSO's locally originated programming.                                 |
| Schedule File                      | An xml file that lists all the spots and times that the spots are to play, for a particular network and zone.                                                                            |
| Slot                               | A slot is a segment of time within a break into which a spot can be scheduled.                                                                                                           |
| Spot                               | A single, schedulable and verifiable, piece of video and audio content within an avail.                                                                                                  |
| Tier                               | A measure of system and data support with regards to Program Specific Ad Insertion, as defined by DVS 639.                                                                               |
| Time Based Format                  | A time based format assigns each break an exact time that a cue message is to be expected and then allows for a buffer around it.                                                        |
| Traffic System                     | Shorthand for Traffic and Billing System.                                                                                                                                                |
| Traffic and Billing (TandB) System | A system that process client orders, creates schedule files, processes verification files, and produces invoices.                                                                        |
| Unique                             | Within the scope of this document, the definition of 'unique' follows SCTE 67, section 5.8's definition of unique and its usage.                                                         |
| Unique Program Identifier          | A bitfield in this file format specification that is equivalent to the unique_program_id field in SCTE 35.                                                                               |
| Verification File                  | An xml file generated by the Ad Insertion System that lists all of the spots that successfully played and failed to play, for a particular network and zone.                             |
| Window                             | A time range, defined by the schedule file, when a cue message is expected.                                                                                                              |
| Window Based                       | A type of avail. Insertion will be triggered by a cue received within a specified time range and not by a Program ID. Window Based avails can be scheduled as time or event based format |
| Zone                               | A geographic sales region.                                                                                                                                                               |

## 6.0 OVERVIEW

A Traffic System shall communicate, through a Schedule file, which spots should be played by the Ad Insertion System in response to various SCTE 35 Cue Messages. The Ad Insertion System shall communicate, through a Verification file, which spots were played

(or attempted to play), which failed to play (due to an error or due to no matching Cue Message), and any Cue Messages that were received but not acted upon.

This document defines the necessary information to communicate both the scheduling of Spots from a Traffic System to an Ad Insertion System and the return path verifications in accordance with the various Tiers of Service described in DVS 639. Additionally, it details the file format for communication between a Traffic System and an SCTE 35 compliant Ad Insertion System.

The schedule and verification files between the Traffic System and the Ad Insertion System are contained within Extensible Markup Language (XML) documents.

## 6.1 General Requirements

A Traffic System compliant with this Standard shall generate schedule files on a per zone, per network, per broadcast day basis. A single schedule file shall not contain scheduled Spots for more than 1 broadcast day.

A Level 0 (as defined in Section 6.2) schedule shall contain all scheduled Spots per zone, network and broadcast day in a single schedule file. A Level 1 (as defined in Section 6.2) schedule file may contain a day part or only contain the changes to an existing schedule file.

Each schedule file shall contain the attributes as defined in Section 7.4. Program-Specific scheduling is enabled through the use of valid values for Unique Program Identifier (for Tier 1 and Tier 2), Avails Expected (for Tier 2) and Avail Number (for Tier 2) attributes. Window based scheduling is enabled through the use of zeros (or by omitting them) for those attributes. Both Window based scheduling and Program based scheduling may exist in the same file, in which case, the Program-Specific schedule lines will be considered the primary schedule and the Window based schedule lines will be considered the alternate schedule (see Section 8.3 in DVS 639).

A single schedule file may contain Tier 1 and Tier 2 elements, but a particular Program element shall be either Tier 1 or Tier 2, and may not have child elements of both Tiers.

### 6.1.1 Schedule & Verification file format requirements

- The Network and Zone Names defined in the Schedule Filename shall match the Network and Zones Names within the schedule and verification files.
- No value is required for optional attributes, and they are only optionally specified.
- Unless otherwise stated, attribute character lengths are maximums.