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## S T A N D A R D S

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Digital Video Subcommittee

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**SCTE OPERATIONAL PRACTICE**

**SCTE 268 2021**

**Operational Practice on the Usage of SCTE 224 for  
Advertising Information**

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## 1. Introduction

### 1.1. Executive Summary

This operational practice discusses the use of SCTE 224 to enable addressable and enhanced advertising for the Provider and Distributor.

### 1.2. Scope

This operational practice describes some of the current addressable ad use cases and how to create SCTE 224 elements to obtain the expected ad response.

### 1.3. Benefits

By using these sample use cases it may be easier to integrate with existing ad systems. It would also simplify the work required for an MVPD or ad vendor to work with multiple programmers.

### 1.4. Intended Audience

Provider and Distributor ad sales, engineering and development groups, ad vendors

### 1.5. Areas for Further Investigation or to be Added in Future Versions

Common demographic terms for passing addressable ad information. Adapt and adjust the <Measured> element to account for new measurement techniques and additional devices.

## 2. Normative References

The following documents contain provisions, which, through reference in this text, constitute provisions of this document. At the time of Subcommittee approval, the editions indicated were valid. All documents are subject to revision; and while parties to any agreement based on this document are encouraged to investigate the possibility of applying the most recent editions of the documents listed below, they are reminded that newer editions of those documents might not be compatible with the referenced version.

### 2.1. SCTE References

- No normative references are applicable.

### 2.2. Standards from Other Organizations

- No normative references are applicable.

### 2.3. Published Materials

- No normative references are applicable.

### 3. Informative References

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

#### 3.1. SCTE References

- SCTE 35 – Digital Program Insertion Cueing Message
- SCTE 67 - Recommended Practice for Digital Program Insertion for Cable
- SCTE 130 - Digital Program Insertion – Advertising Systems Interfaces Part 1: Advertising Systems Overview
- SCTE 224 - Event Scheduling and Notification Interface (ESNI)
- SCTE 250 – Real-Time Event Signaling and Management API (ESAM)

#### 3.2. Standards from Other Organizations

- IAB VAST – Digital Video Ad Serving Template
- ATSC [A/335:2016, Video Watermark Emission, with Amendment No. 1](#)
- SMPTE RP 2021-5:2013 Using Ad-ID and EIDR as Alternate Identifiers in SMPTE BXF and ATSC PMCP

#### 3.3. Published Materials

- No informative references are applicable.

### 4. Compliance Notation

<i>shall</i>	This word or the adjective “ <i>required</i> ” means that the item is an absolute requirement of this document.
<i>shall not</i>	This phrase means that the item is an absolute prohibition of this document.
<i>forbidden</i>	This word means the value specified shall never be used.
<i>should</i>	This word or the adjective “ <i>recommended</i> ” 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 weighted before choosing a different course.
<i>should not</i>	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.
<i>may</i>	This word or the adjective “ <i>optional</i> ” 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.
<i>deprecated</i>	Use is permissible for legacy purposes only. Deprecated features may be removed from future versions of this document. Implementations should avoid use of deprecated features.

## 5. Abbreviations and Definitions

### 5.1. Abbreviations

ACR	automatic content recognition
ADS	ad decision service
ATSC	Advanced Television System Committee
SCTE	Society of Cable Telecommunications Engineers
MVPD	Multichannel Video Program Distributor
VAST	Video Ad Serving Template

### 5.2. Definitions

Advertisement (also called “Ad”)	Non-program material telecast as a solicitation to buy a product or service.
Ad-ID	Format identifier for identifying advertising assets
Affiliate	A content Distributor (MVPD) which has negotiated rights for local or regional Spot insertion into Provider-designated Avails.
Aggregation	A placement opportunity where the entire duration is being given to an ADS to fill with appropriate ads based on whatever information the ADS has available.
Allocation	A subdivision of a MediaPoint used as an action in a ViewingPolicy to allow for multiple owners of the time allocated. An Allocation may be divided into individual insertion events (Slots).
Avail (Availability)	An Avail is a Network provided opportunity for an Affiliate to insert a Spot(s) into a Program. The start of an Avail is indicated as a splice event in the programming stream. The duration of the Avail <i>may</i> vary from a few seconds to several minutes. (See SCTE 67)
Break	In SCTE 35 and this document there is a Segmentation Type of Break Start/End that is typically used to mark all of the non-program sections. That would include promotional material and advertisements including barter ads. In other contexts a Break may be an Avail or an actual insertion in progress. In a sales context, a break is divided into sellable units (Avails). In an insertion context, a break is divisible into individual insertion events.
Conditional Linear	Play the linear ad as telecast if the viewer is of the correct demographic, otherwise replace.
Creative Versioning	A type of ad replacement that lets a single advertiser specify one or more ads that are more appropriate for the viewer. An example would be a car company having ads for a sports car, minivan, SUV and truck that could be played depending on the viewers demographics.
Demographic String	A method of encoding multiple demographic identifiers into a single object.
Distributor	Entity that receives content from Provider(s) and then sends that to subscribers. In the context of this operational practice, the Distributor typically will insert or replace advertisements for itself and the Provider.
Kidvid	FCC rules that limit the amount and types of advertising that can appear on programming that is directed at an audience of children.

Linear Addressable	An ad type where a Distributor may replace an ad for a Provider. Creative versioning and aggregation are types of Linear Addressable.
Network	A cable, satellite, or digital terrestrial content channel(s) such as CNN, ESPN, etc. offered by a content Provider. The term can also apply to an Affiliate’s locally originated programming.
Placement Opportunity	A potentially constrained location relative to digital content where ad insertion or content alterations can occur. The alterations may include insertions, replacements, or deletions of content in whole or in part. These locations, which contain the opportunity for content insertion, have traditionally been referred to as Avails for linear video content; however, placement opportunity refers to address and time locations where content may be placed, regardless of platform (i.e. Video in VOD, Banner Images on Menus and ITV channels, etc.).
Program	A television show or event, aired by a Network, which <i>may</i> be at a regularly scheduled time and of determinate duration (e.g., SportsCenter, The Andy Griffith Show) or an occasional event at a non-regular time and of a variable duration (e.g., live coverage of a sports event or an awards show).
Provider	Content originator, entity that typically creates SCTE 224 feeds.
Slot	A Slot is a segment of time within an Allocation into which a Provider can supply additional information on how to schedule the unit.
Spot	A single, schedulable and verifiable, element of non-program material (such as an Advertisement, a public service announcement or a promotional announcement) inserted into an Avail. A Spot usually has a duration under 2 minutes, typically of a standard fixed length of 15, 20, 30, 60, 90, or 120 seconds.
Traffic System (also, commonly “traffic and billing system” or “T&B system”)	A system that processes client orders, creates schedule files, assigns specific copy, processes Verification Files, and produces invoices.
Zone	A geographic region within an MVPD’s distribution plant separable from other regions for the purpose of geographically targeted Spot insertion.

## 6. Use of SCTE 224

Early versions of adding advertising information to SCTE 224 focused on adding the information to the <Metadata> tag. While the information is metadata, it also tends to need additional information as to when to perform the addressable ad insertion and the information may vary depending on the Distributor or platform the content is being delivered on. This operational practice uses the SCTE 224 <Policy> element instead of <Metadata>. It also uses a <ViewingPolicy> to create an audience and action to implement the <Policy>. Using a <Policy> has advantages for processing since some ad systems will not really care if a <MediaPoint> changes, only if the ad directives under that <MediaPoint> have changed, and they can track the <Policy> or <ViewingPolicy> to that effect.

### 6.1. SCTE 224 Producers

This is typically the Provider of the content as a single feed that can be used for many purposes. The Provider can also create unique feeds for each consumer if there is information that it does

not want the consumer to have, typically due to contractual reasons. It is possible that a Distributor or a redistributor will use an SCTE 250 like device that alters the signals in the feed (which may use SCTE 224 as a source) and they may need to generate a new SCTE 224 feed for downstream devices.

## **6.2. SCTE 224 Consumers**

The SCTE 224 producer *may* control what each consumer is given in their feed. There may be reasons for a Distributor or ad vendor to get more information in a single feed if they actually operate systems for multiple Distributors.

### **6.2.1. Distributors**

Distributors can use SCTE 224 feeds for many purposes including guide data, regional and web blackouts, and ad information. The ad information tells them what to do with Provider and Distributor Avails. It also gives them fairly accurate timing so they can use whatever data they have on who is actually watching a channel at close to the insertion point to pre-load the ad decisions.

### **6.2.2. Ad Vendors**

Ad vendors may service multiple Providers and Distributors and will need a feed with the appropriate information for all of the ad vendors' customers. Ad vendors *may* also want to use the precise timing that may be available to do a better job of pre-selecting ads for a consumer and stage as appropriate for a better user experience.

### **6.2.3. Redistributors**

These are companies that ingest live network feeds and redistribute the content, typically to smaller MVPDs. They often provide services such as transcoding, VOD, IP delivery and various ad services that they either run themselves or run for the Distributor.

## **6.3. Viewer data and addressable groups.**

There are many different data systems available, and the amount of data passed (or allowed to be used) by the Provider for a given Distributor will vary. This makes it likely that Providers will need to create multiple audiences for the various Distributors that they work with. Addressable data will be exchanged between the Provider and the ad systems vendor and possibly between the Distributor and ad systems vendor.

## **6.4. Marking Opportunities**

Typically, SCTE 35 is used to mark MediaPoints using the `Splice_Insert` or `Time_Signal` commands with a `segmentation_descriptor` for ad content. A recent addition to SCTE 224 2020 also supports using watermarks, automated content recognition (ACR) or any other method.

### **6.4.1. Segmentation Descriptor**

This is the preferred way to mark a Placement Opportunity in a MediaPoint by using a `time_signal` command with a `segmentation_descriptor` with a `segmentation_type_id` of Provider or Distributor Placement Opportunity. The information in the descriptor should be able to



uniquely identify the opportunity. When replacing a single ad, the Provider Ad type *may* be useful as well.

```
<MatchSignal>
<Assert>/SpliceInfoSection/SegmentationDescriptor[@segmentationEventId = 1207985498 and
@segmentationTypeId = 52]/SegmentationUpid[@segmentationUpidType = 8 and
text()='0x000000003395ded8']</Assert>
</MatchSignal>
<MatchSignal>
<Assert>/SpliceInfoSection/SegmentationDescriptor[@segmentationEventId = 1237985499 and
@segmentationTypeId = 48]/SegmentationUpid[@segmentationUpidType = 9 and
text()='0x000000343395ded8']</Assert>
</MatchSignal>
```

#### 6.4.2. Splice Insert

Some Distributors do not have the ability to use a Placement Opportunity signal and require that the older splice\_insert command be used. This would typically have a MatchSignal as shown below. If the splice\_event\_id is unique and the SCTE 224 generation system knows what it is, that may be used as a unique identifier for that break.

```
<MatchSignal>
<Assert>/SpliceInfoSection/SpliceInsert[@spliceEventId = 1267985422]</Assert>
</MatchSignal>
```

#### 6.4.3. Watermark or ACR

There are some trigger methods that use watermarks such as the ATSC 3.0 version. SCTE 224 allows for this by specifying the schema to use for a MatchSignal. When there are multiple MatchSignals they are treated as a logical OR and any signal can trigger the MediaPoint.

```
<MatchSignal schema="https://wmprov.org/schemas/vast_extensions1.0.xsd">
<Assert>/XYZ/Watermark/PublisherId[text()='101']</Assert>
<Assert>/XYZ/Watermark/Match/Equals/Bytes[text()='0000fafa01']</Assert>
</MatchSignal>
<MatchSignal schema="https://wmproj.org/schemas/vast_extensions1.0.xsd">
<Assert>/XYZ/Watermark/PublisherId[text()='101']</Assert>
<Assert>/XYZ/Watermark/Match/Equals/Bytes[text()='00000056ce']</Assert>
</MatchSignal>
```

### 6.5. Delivering Ad Information

There are currently three methods that are being used for SCTE 224 Ad information.

- 1) Simply a notification with a MatchSignal that a replacement Placement Opportunity is coming up with a duration. This has no additional information as to the owner or any other data about how the Placement Opportunity should be handled.
- 2) Identify in SCTE 224 the break structure and what types of replacement schedules should be used, which ADS to use, where the order and target data is.
- 3) Give complete information in SCTE 224 about which ads should be replaced and what the replacement ads and targets are.

With the publication of this Operational Practice, the use of 1 is discouraged as it can be confusing to a Distributor or redistributor as to what should happen at that point. The other two methods depend on what the Provider is trying to accomplish in the Avail.

## 7. Use of Audience, Action, ViewingPolicy and Policy

The current SCTE 224 package has three related schemas, audience.xsd, action.xsd, and metadata.xsd. While developing this document, it was found that the information in the metadata.xsd schema could be expressed more logically in the action.xsd schema rather than being a separate standalone schema.

While developing this document, new elements have been added to the audience schema. They are still referenced in this OP for additional usage information.

This operational practice does not utilize the metadata schema, rather it adds a new <Allocation> element to the action schema. This was done to better fit in to the audience/action structure of SCTE 224. Since an <Allocation> typically covers a specific <Audience>, combining these in to a <ViewingPolicy> is more precise then putting that under a <Metadata> tag. There is further description in this document about the <Allocation> element in Section 9.

### 7.1. Audience

Add <Distributor> - This is the registered domain name of the Distributor providing the content to the subscriber. This can be used where different Distributors have different technical capabilities, use different vendors, or are allowed different Placement Opportunities. In some cases the Provider may want to send a specific SCTE 224 feed to each Distributor. In other cases, the Provider may be sending this to an ad vendor or redistributor that provides multiple Distributors and requires all of the information.

Add a new audience called <Measured> (boolean) to indicate if this ad is being viewed on a device that reports measurement to a Media Ratings Council approved measurement company. Typical measured devices are over the air TV sets, set top boxes, streaming media boxes or connected TV's. Typical non-measured devices include phones, tablets, laptops and PC's. Many of these non-measured devices though can send the video and audio to a TV that may be being measured. The device should provide that information if it is available. As measurement companies evolve and measure more devices and expand their capability to allow for addressable advertising, this value may need to be combined with other audience data to be useful.

Add an audience <All> to include all viewers. This is a useful audience that many Providers create out of an audience that is made up of both of a binary audience (public or private network). It is simpler to actually create this value then have various Providers create it in their own unique ways.

Add audience <ViewTime> (viewing time from live, type xs:duration) to enable ad insertion before or after some duration from the start of playback. It has the boolean attribute "after" that is optional with a default of "true".

### 7.2. Action

A new action called Allocation (Section 9) is used to divide up content for a MediaPoint in multiple different ways and to optionally signal how those divisions should be used.

### 7.3. Viewing Policy

The Viewing Policy puts Audience and Action elements together to perform the intended purpose.

### 7.4. Policy

The Policy element combines one or more Viewing Policy(s). The Policy will get connected to one or more MediaPoints with the Apply element. There are no changes to Policy in this document.

## 8. Use Cases with examples

The following use cases provide examples of the use of these additions to Action, Audience, and Policy. This is not an exhaustive list but provides some guidance as to how new use cases *should* be implemented.

### 8.1. Full Placement Opportunity aggregation

This is a common use case where the entire Placement Opportunity is used and filled by an ad server with addressable ads. Some Providers just put the SCTE 35 placement opportunity segmentation descriptor in the feed and use non SCTE 224 methods (notes, emails, contracts) to inform the Distributor what to do with these opportunities. This Operational Practice provides a method for SCTE 224 to better describe the opportunity and allow for changes on a per opportunity basis.

In this section we show how to signal when a Placement Opportunity should be used by creating an audience (in this case Measured=false)

<!-- Full PO aggregation policy on non measured devices -->

```
<Audience xmlns:action="urn:scte:224:action" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:audience="urn:scte:224:audience"
xmlns:xlink="http://www.w3.org/1999/xlink"
id="network.com/audience/Not-Measured" lastUpdated="2020-09-01T00:00:00Z" xmlns="http://www.scte.org/schemas/224">
  <Measured>false</Measured>
</Audience>
```

```
<ViewingPolicy xmlns:action="urn:scte:224:action" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:audience="urn:scte:224:audience"
xmlns:xlink="http://www.w3.org/1999/xlink"
id="network.com/FRED/viewingpolicy/MidrollDAI" description="MVPDC-Measured" lastUpdated="2020-09-01T00:00:00Z"
xmlns="http://www.scte.org/schemas/224">
  <Audience xlink:href="network.com/audience/Not-Measured" />
  <Action>
    <MidrollDAI>true</MidrollDAI>
  </Action>
</ViewingPolicy>
```

```
<Policy xmlns:action="urn:scte:224:action" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:audience="urn:scte:224:audience"
xmlns:xlink="http://www.w3.org/1999/xlink"
id="network.com/FRED/policy/midrollDAI" lastUpdated="2020-09-02T17:02:30.527Z" xmlns="http://www.scte.org/schemas/224">
  <ViewingPolicy xlink:href="network.com/viewingpolicy/MidrollDAI"/>
</Policy>
```

```
<MediaPoint id="/break/1207985498.M1+F4w/start" description="Placement Opportunity"
lastUpdated="2020-08-05T17:21:20.389Z" effective="2020-08-05T16:59:05Z"
expires="2020-08-05T17:07:50Z" matchTime="2020-08-05T17:02:05Z" expectedDuration="PT2M45S"
order="127">
  <AltID description="PlacementOpportunityId">1207985498.M1+F4w</AltID>
```

```

<Apply>
<Policy xlink:href="network.com/FRED/policy/midrollDAI"/>
</Apply>
<MatchSignal>
<Assert>SpliceInfoSection/SegmentationDescriptor[@segmentationEventId = 1207985498 and
@segmentationTypeId = 52]/SegmentationUpid[@segmentationUpidType = 8 and
text()='0x000000003395ded8']</Assert>
</MatchSignal>
</MediaPoint>

```

## 8.2. Provider linear ad replacement with multiple Distributors

In this use case the Provider is having three Distributors replace a single ad in the linear feed on measured platforms (set tops, streaming sticks with Distributor app). The two different sets of Distributors use different Ad server systems and the orders placed on those systems differ, requiring different Allocation and Slot models.

The Provider needs to send the schedule information as the Provider's ad system needs to select acceptable spots for the programming to respect other advertisers' separation and possibly FCC (kidvid) requirements.

```

<!-- provider linear ad replacement for multiple distributors with different schedules -->

```

```

<Audience xmlns:action="urn:scte:224:action" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:audience="urn:scte:224:audience"
xmlns:xlink="http://www.w3.org/1999/xlink"
id="network.com/audience/MVPDC-Measured" lastUpdated="2020-09-01T00:00:00Z" xmlns="http://www.scte.org/schemas/224">
<Distributor>cableco.com</Distributor>
<Measured>>true</Measured>
</Audience>

```

```

<Audience xmlns:action="urn:scte:224:action" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:audience="urn:scte:224:audience"
xmlns:xlink="http://www.w3.org/1999/xlink"
id="network.com/audience/MVPDQ-Measured" lastUpdated="2020-09-01T00:00:00Z" xmlns="http://www.scte.org/schemas/224">
<Distributor>anothercableco.com</Distributor>
<Distributor>yacc.com</Distributor>
<Measured>>true</Measured>
</Audience>

```

```

<ViewingPolicy xmlns:action="urn:scte:224:action" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:audience="urn:scte:224:audience"
xmlns:xlink="http://www.w3.org/1999/xlink"
id="network.com/FRED/viewingpolicy/MVPDC-12345" description="MVPDC-Measured" lastUpdated="2020-09-01T00:00:00Z"
xmlns="http://www.scte.org/schemas/224">
<Audience xlink:href="network.com/audience/MVPDC-Measured" />
<Action>
<Allocation ownerType="PROVIDER" ownerName="SuperMediaCo" duration="PT60S" ads="easyhub.com">
<Slots>
<Slot duration="PT30S">
<AdsReferenceId>11111ab</AdsReferenceId>
<AdsReferenceId>12345gf</AdsReferenceId>
<AdsReferenceId>11223zc</AdsReferenceId>
<AdsReferenceId>12121jk</AdsReferenceId>
</Slot>
<Slot duration="PT15S" offset="PT30S"/>
<Slot duration="PT15S" offset="PT45S"/>
</Slots>
</Allocation>
</Action>
</ViewingPolicy>

```

```

<ViewingPolicy xmlns:action="urn:scte:224:action" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:audience="urn:scte:224:audience"
xmlns:xlink="http://www.w3.org/1999/xlink"
id="network.com/FRED/viewingpolicy/MVPDQ-12346" description="MVPDQ-Measured" lastUpdated="2020-09-01T00:00:00Z"
xmlns="http://www.scte.org/schemas/224">

```

```

<Audience xlink:href="network.com/audience/MVPDQ-Measured" />
<Action>
<Allocation ownerType="PROVIDER" ownerName="SuperMediaCo" duration="PT60S" ads="multiclick.com">
<Slots>
<Slot duration="PT15S" offset="PT0S">
<AdsReferenceId>98765</AdsReferenceId>
<AdsReferenceId>87654</AdsReferenceId>
<AdsReferenceId>54321</AdsReferenceId>
<AdsReferenceId>56343</AdsReferenceId>
</Slot>
<Slot duration="PT30S" offset="PT15S">
<AdsReferenceId referenceType="contract">123</AdsReferenceId>
</Slot>
<Slot duration="PT15S" offset="PT45S"/>
</Slots>
</Allocation>
</Action>
</ViewingPolicy>

<Policy xmlns:action="urn:scte:224:action" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:audience="urn:scte:224:audience"
xmlns:xlink="http://www.w3.org/1999/xlink"
id="network.com/FRED/policy/linear12345" lastUpdated="2020-09-02T17:02:30.527Z" xmlns="http://www.scte.org/schemas/224">
<ViewingPolicy xlink:href="network.com/viewingpolicy/MVPDC-12345"/>
<ViewingPolicy xlink:href="network.com/viewingpolicy/MVPDQ-12346"/>
</Policy>

<MediaPoint id="/provider/1207985499.M1+F9w/start" description="Provider Ad"
lastUpdated="2020-08-05T17:21:20.389Z" effective="2020-08-05T17:09:14Z"
expires="2020-08-05T17:18:14Z" matchTime="2020-08-05T17:12:44Z" expectedDuration="PT60S"
order="766">
<AltID description="ProviderAdId">1207985499.M1+F9w</AltID>
<Apply>
<Policy xlink:href="network.com/FRED/policy/linear12345"/>
</Apply>
<MatchSignal schema="https://projectoar.org/schemas/vast_extensions1.0.xsd">
<Assert>/OAR/Watermark/PublisherId[text()='101']</Assert>
<Assert>/OAR/Watermark/Match/Equals/Bytes[text()='00000056ce']</Assert>
</MatchSignal>
<MatchSignal>
<Assert>/SpliceInfoSection/SpliceInsert[@spliceEventId = 1217985422]</Assert>
</MatchSignal>
<MatchSignal>
<Assert>/SpliceInfoSection/SegmentationDescriptor[@segmentationEventId = 1227985499 and
@segmentationTypeId = 48]/SegmentationUpid[@segmentationUpidType = 9 and
text()='0x000000003395ded8']</Assert>
</MatchSignal>
</MediaPoint>

```

### 8.3. Entire Placement Opportunity with different local splits

This use case has an entire Placement Opportunity being replaced on a non-measured platform with different methods and durations of doing a split with the local avails. In the first case the MVPD has a 60 second local Allocation that occurs at the end of the break, the second MVPD only gets a 30 second Allocation that also occurs at the end of the break. In the last case the entire break is assigned to the Provider, however the Provider's ad server may perform additional logic to split the opportunity. An example would be if the Ad request came in from MVPD cabletelcoco and the ADS knows that MVPD cabletelcoco gets a 10% share of the ad time, it can randomly add a split to satisfy the 10% over many ad requests and make a redirect call to MVPD cabletelcoco's ADS to fill the time.

<!-- Entire PO is DAI with varying ad splits between Distributors -->

```

<Audience xmlns:action="urn:scte:224:action" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:audience="urn:scte:224:audience"
xmlns:xlink="http://www.w3.org/1999/xlink"
id="network.com/audience/MVPDC-NotMeasured" lastUpdated="2020-09-01T00:00:00Z" xmlns="http://www.scte.org/schemas/224">

```

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```
<Distributor>cableco.com</Distributor>
<Measured>>false</Measured>
</Audience>

<Audience xmlns:action="urn:scte:224:action" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:audience="urn:scte:224:audience"
xmlns:xlink="http://www.w3.org/1999/xlink"
id="network.com/audience/MVPDR-NotMeasured" lastUpdated="2020-09-01T00:00:00Z" xmlns="http://www.scte.org/schemas/224">
<Distributor>canadiancableco.com</Distributor>
<Measured>>false</Measured>
</Audience>

<Audience xmlns:action="urn:scte:224:action" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:audience="urn:scte:224:audience"
xmlns:xlink="http://www.w3.org/1999/xlink"
id="network.com/audience/NotMeasured" lastUpdated="2020-09-01T00:00:00Z" xmlns="http://www.scte.org/schemas/224">
<Measured>>false</Measured>
</Audience>

<ViewingPolicy xmlns:action="urn:scte:224:action" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:audience="urn:scte:224:audience"
xmlns:xlink="http://www.w3.org/1999/xlink"
id="network.com/FRED/viewingpolicy/MVPDC-54321" description="MVPDC Not Measured" lastUpdated="2020-09-01T00:00:00Z"
xmlns="http://www.scte.org/schemas/224">
<Audience xlink:href="network.com/audience/MVPDC-NotMeasured" />
<Action>
<Allocation ownerType="PROVIDER" ownerName="SuperMediaCo" duration="PT2M" ads="easyhub.com"/>
<Allocation ownerType="DISTRIBUTOR" offset="PT2M" duration="PT1M"/>
</Action>
</ViewingPolicy>

<ViewingPolicy xmlns:action="urn:scte:224:action" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:audience="urn:scte:224:audience"
xmlns:xlink="http://www.w3.org/1999/xlink"
id="network.com/FRED/viewingpolicy/MVPDR-54322" description="MVPDR Not Measured" lastUpdated="2020-09-01T00:00:00Z"
xmlns="http://www.scte.org/schemas/224">
<Audience xlink:href="network.com/audience/MVPDR-NotMeasured" />
<Action>
<Allocation ownerType="PROVIDER" ownerName="SuperMediaCo" duration="PT2M30S" ads="multiclick.com"/>
<Allocation ownerType="DISTRIBUTOR" offset="PT2M30S" duration="PT30S"/>
</Action>
</ViewingPolicy>

<ViewingPolicy xmlns:action="urn:scte:224:action" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:audience="urn:scte:224:audience"
xmlns:xlink="http://www.w3.org/1999/xlink"
id="network.com/FRED/viewingpolicy/PROV-54323" description="Provider Not Measured" lastUpdated="2020-09-01T00:00:00Z"
xmlns="http://www.scte.org/schemas/224">
<Audience xlink:href="network.com/audience/NotMeasured" />
<Action>
<!-- In this case it is likely the providers ADS will do a percent split and knows from the VAST call which MVPD is calling -->
<Allocation ownerType="PROVIDER" ownerName="SuperMediaCo" duration="PT3M" ads="easyhub.com"/>
</Action>
</ViewingPolicy>

<Policy xmlns:action="urn:scte:224:action" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:audience="urn:scte:224:audience"
xmlns:xlink="http://www.w3.org/1999/xlink"
id="network.com/FRED/policy/linear12346" lastUpdated="2020-09-02T17:02:30.527Z" xmlns="http://www.scte.org/schemas/224">
<ViewingPolicy xlink:href="network.com/FRED/viewingpolicy/MVPDC-54321"/>
<ViewingPolicy xlink:href="network.com/FRED/viewingpolicy/MVPDR-54322"/>
<ViewingPolicy xlink:href="network.com/FRED/viewingpolicy/PROV-54323"/>
</Policy>

<MediaPoint id="/break/1207985499.M1+F4w/start" description="Placement Opportunity"
lastUpdated="2020-08-05T17:21:20.389Z" effective="2020-08-05T17:09:14Z"
expires="2020-08-05T17:18:14Z" matchTime="2020-08-05T17:12:14Z" expectedDuration="PT3M"
order="736">
<AltID description="PlacementOpportunityId">1207985499.M1+F4w</AltID>
<Apply>
<Policy xlink:href="network.com/FRED/policy/linear12346"/>
</Apply>
<MatchSignal>
<Assert>/SpliceInfoSection/SegmentationDescriptor[@segmentationEventId = 1207985499 and
@segmentationTypeId = 52]/SegmentationUpid[@segmentationUpidType = 8 and
text()='0x000000003395ded8']</Assert>
```

```
</MatchSignal>
</MediaPoint>
```

## 8.4. Day 8 Dynamic Ad Insertion

In this use case the Provider is using the SCTE 35 Break start/end to denote the non-program content. They want the broadcast feed to remain for the C7 rating period, but if the content is viewed after day 8 they want to remove any existing barter, promo or ads and optionally replace it with addressable ads.

An extension to this would be to look into additional actions to possibly vary the size of the break.

<!-- Day 8 DAI example, typically used on a Break start -->

```
<Audience xmlns:action="urn:scte:224:action" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:audience="urn:scte:224:audience"
xmlns:xlink="http://www.w3.org/1999/xlink"
id="network.com/audience/D8DAI" lastUpdated="2020-09-01T00:00:00Z" xmlns="http://www.scte.org/schemas/224">
<ViewTime>PT8D</ViewTime>
</Audience>
```

```
<ViewingPolicy xmlns:action="urn:scte:224:action" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:audience="urn:scte:224:audience"
xmlns:xlink="http://www.w3.org/1999/xlink"
id="network.com/FRED/viewingpolicy/D8DAI" description="D8 DAI" lastUpdated="2020-09-01T00:00:00Z" xmlns="http://www.scte.org/schemas/224">
<Audience xlink:href="network.com/audience/D8DAI"/>
<Action>
<PrerollDAI>true</PrerollDAI>
<MidRollDAI>true</MidRollDAI>
<PostrollDAI>true</PostrollDAI>
</Action>
</ViewingPolicy>
```

```
<Policy xmlns:action="urn:scte:224:action" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:audience="urn:scte:224:audience"
xmlns:xlink="http://www.w3.org/1999/xlink"
id="network.com/FRED/policy/d8dai" lastUpdated="2020-09-02T17:02:30.527Z" xmlns="http://www.scte.org/schemas/224">
<ViewingPolicy xlink:href="network.com/viewingpolicy/D8DAI"/>
</Policy>
```

```
<MediaPoint id="/brk/1207985499.M1+F7w/start" description="Break"
lastUpdated="2020-08-05T17:21:20.389Z" effective="2020-08-05T17:09:14Z"
expires="2020-08-05T17:18:14Z" matchTime="2020-08-05T17:11:46Z" expectedDuration="PT4M"
order="706">
<AltID description="PlacementOpportunityId">1207985499.M1+F7w</AltID>
<Apply>
<Policy xlink:href="network.com/FRED/policy/d8dai"/>
</Apply>
<MatchSignal>
<Assert>SpliceInfoSection/SegmentationDescriptor[@segmentationEventId = 1217985499 and
@segmentationTypeId = 34]/SegmentationUpId[@segmentationUpIdType = 8 and
text()='0x000000003395ded8']</Assert>
</MatchSignal>
</MediaPoint>
```

## 8.5. Linear Single Ad, across Four Distributors and Watermark for TV replacement

In this use case a single Provider ad on four different Distributor or TV platforms is replaced when being played out on a measured system. There are three triggers in the feed to activate this MediaPoint, an SCTE 35 splice\_insert, an SCTE 35 time\_signal with a segmentation descriptor, and two watermarks.



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<!-- 3 MVPDs with different ADS systems for Provider linear addressable with schedules single provider ad with OAR and splice insert and PO type 9 -->

```
<Audience xmlns:action="urn:scte:224:action" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:audience="urn:scte:224:audience"
xmlns:xlink="http://www.w3.org/1999/xlink"
id="network.com/audience/MVPDC-Measured" lastUpdated="2020-09-01T00:00:00Z" xmlns="http://www.scte.org/schemas/224">
  <Distributor>cableco.com</Distributor>
  <Measured>true</Measured>
</Audience>
```

```
<Audience xmlns:action="urn:scte:224:action" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:audience="urn:scte:224:audience"
xmlns:xlink="http://www.w3.org/1999/xlink"
id="network.com/audience/MVPDR-Measured" lastUpdated="2020-09-01T00:00:00Z" xmlns="http://www.scte.org/schemas/224">
  <Distributor>yacc.com</Distributor>
  <Measured>true</Measured>
</Audience>
```

```
<Audience xmlns:action="urn:scte:224:action" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:audience="urn:scte:224:audience"
xmlns:xlink="http://www.w3.org/1999/xlink"
id="network.com/audience/MVPDA-Measured" lastUpdated="2020-09-01T00:00:00Z" xmlns="http://www.scte.org/schemas/224">
  <Distributor>telco.com</Distributor>
  <Measured>true</Measured>
</Audience>
```

```
<ViewingPolicy xmlns:action="urn:scte:224:action" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:audience="urn:scte:224:audience"
xmlns:xlink="http://www.w3.org/1999/xlink"
id="network.com/FRED/viewingpolicy/MVPDAI-M-123" description="MVPDC Measured" lastUpdated="2020-09-01T00:00:00Z"
xmlns="http://www.scte.org/schemas/224">
  <Audience xlink:href="network.com/audience/MVPDA-Measured"/>
  <Audience xlink:href="network.com/audience/MVPDR-Measured"/>
  <Action>
  <Allocation ownerType="PROVIDER" ownerName="SuperMediaCo" duration="PT30S" ads="invisible.com">
    <Slots>
      <Slot duration="PT30S">
        <AdsReferenceId>93245</AdsReferenceId>
        <AdsReferenceId>10334</AdsReferenceId>
        <AdsReferenceId>11233</AdsReferenceId>
        <AdsReferenceId>12543</AdsReferenceId>
      </Slot>
    </Slots>
  </Allocation>
</Action>
</ViewingPolicy>
```

```
<ViewingPolicy xmlns:action="urn:scte:224:action" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:audience="urn:scte:224:audience"
xmlns:xlink="http://www.w3.org/1999/xlink"
id="network.com/FRED/viewingpolicy/MVPDC-M-1245" description="MVPDR Measured" lastUpdated="2020-09-01T00:00:00Z"
xmlns="http://www.scte.org/schemas/224">
  <Audience xlink:href="network.com/audience/MVPDC-Measured"/>
  <Action>
  <Allocation ownerType="PROVIDER" ownerName="SuperMediaCo" duration="PT30S" ads="easyhub.com">
    <Slots>
      <Slot duration="PT30S">
        <AdsReferenceId>6753</AdsReferenceId>
        <AdsReferenceId>8765</AdsReferenceId>
      </Slot>
    </Slots>
  </Allocation>
</Action>
</ViewingPolicy>
```

```
<Policy xmlns:action="urn:scte:224:action" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:audience="urn:scte:224:audience"
xmlns:xlink="http://www.w3.org/1999/xlink"
id="network.com/FRED/policy/3MVPD" lastUpdated="2020-09-02T17:02:30.527Z" xmlns="http://www.scte.org/schemas/224">
  <ViewingPolicy xlink:href="network.com/viewingpolicy/MVPDAI-M-123"/>
  <ViewingPolicy xlink:href="network.com/viewingpolicy/MVPDC-M-1245"/>
</Policy>
```



```

<MediaPoint id="/provider/1207985499.M1+F9w/start" description="Provider Ad"
  lastUpdated="2020-08-05T17:21:20.389Z" effective="2020-08-05T17:17:26Z"
  expires="2020-08-05T17:26:41Z" matchTime="2020-08-05T17:20:46Z" expectedDuration="PT60S"
  order="1248">
  <AltID description="ProviderAdId">1207985499.M1+F9w</AltID>
  <AltID description="Ad-ID" type="Ad-ID">ZAPQ0004000H</AltID>
  <Apply>
  <Policy xlink:href="network.com/FRED/policy/3MVPD"/>
  </Apply>
  <MatchSignal schema="https://projectoar.org/schemas/vast_extensions1.0.xsd">
  <Assert>/OAR/Watermark/PublisherId[text()='101']</Assert>
  <Assert>/OAR/Watermark/Match/Equals/Bytes[text()='0000fafa01']</Assert>
  </MatchSignal>
  <MatchSignal schema="https://projectoar.org/schemas/vast_extensions1.0.xsd">
  <Assert>/OAR/Watermark/PublisherId[text()='101']</Assert>
  <Assert>/OAR/Watermark/Match/Equals/Bytes[text()='00000056ce']</Assert>
  </MatchSignal>
  <MatchSignal>
  <Assert>/SpliceInfoSection/SpliceInsert[@spliceEventId = 1267985422]</Assert>
  </MatchSignal>
  <MatchSignal>
  <Assert>/SpliceInfoSection/SegmentationDescriptor[@segmentationEventId = 1237985499 and
    @segmentationTypeId = 48]/SegmentationUpId[@segmentationUpIdType = 9 and
    text()='0x000000343395ded8']</Assert>
  </MatchSignal>
</MediaPoint>

```

## 8.6. Conditional Linear

Conditional linear is useful when the Provider inserts an advertisement in the broadcast stream that is targeted at the typical audience demographic for that program/network/time of day. Not all viewers will be in that addressable group and the Provider may then be able to replace the ad, possibly using creative versioning or a multiple advertiser list.

The audience needs to be defined using some form of demographics. Since different locations where the program/ad is played will have different data set suppliers, there may need to be multiple audiences based on the Distributor and what data sets they can use.

The current audience schema does not have any demographics elements in it, so the <Demographic> element is invented for this example and is an area for future work. It is possible to use geographic qualifiers that exist in the audience schema to specify an ad zone or zipcode, but they are typically not what this use case is implemented for.

In the first <Audience> example below, a fictitious data source, “ducks.com”, is used for viewers that are NOT (state=false) a truckIntender, that is, someone the data source has indicated is NOT likely to be buying a pickup truck. In the next <Audience> example the data source is the Distributor “telco.com”; they use a Demographic String to represent NOT a truckIntender. The NOT a member of the demographic is because the action is to be executed if the viewer is not a truckIntender, most likely because the linear ad is for a truck. So the linear ad is to be replaced if the viewer is NOT part of the demographic that the linear ad is targeted to.

```

<Audience xmlns:action="urn:scte:224:action" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:audience="urn:scte:224:audience"
  xmlns:xlink="http://www.w3.org/1999/xlink"
  id="network.com/audience/MVPDC-Truck" lastUpdated="2020-09-01T00:00:00Z" xmlns="http://www.scte.org/schemas/224">
  <Distributor>cableco.com</Distributor>
  <Measured>true</Measured>

```

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```
<Demographic datasource=ducks.com state=false>truckIntender</Demographic>
</Audience>
```

```
<Audience xmlns:action="urn:scte:224:action" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:audience="urn:scte:224:audience"
xmlns:xlink="http://www.w3.org/1999/xlink"
id="network.com/audience/MVPDT-Truck" lastUpdated="2020-09-01T00:00:00Z" xmlns="http://www.scte.org/schemas/224">
<Distributor>telco.com</Distributor>
<Measured>true</Measured>
<Demographic datasource=telco.com>/A32Fgt5632</Demographic>
</Audience>
```

```
<ViewingPolicy xmlns:action="urn:scte:224:action" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:audience="urn:scte:224:audience"
xmlns:xlink="http://www.w3.org/1999/xlink"
id="network.com/FRED/viewingpolicy/CondLin123" description="MVPDR Measured" lastUpdated="2020-09-01T00:00:00Z"
xmlns="http://www.scte.org/schemas/224">
<Audience xlink:href="network.com/audience/MVPDC-Truck"/>
<Audience xlink:href="network.com/audience/MVPDT-Truck"/>
<Action>
<Allocation ownerType="PROVIDER" ownerName="SuperMediaCo" duration="PT30S" ads="easyhub.com">
<Slots>
<Slot duration="PT30S">
<AdsReferenceId>6753</AdsReferenceId>
<AdsReferenceId>8765</AdsReferenceId>
</Slot>
</Slots>
</Allocation>
</Action>
</ViewingPolicy>
```

```
<MediaPoint id="/provider/1207985499.M1+F9w/start" description="Provider Ad"
lastUpdated="2020-08-05T17:21:20.389Z" effective="2020-08-05T17:17:26Z"
expires="2020-08-05T17:26:41Z" matchTime="2020-08-05T17:20:46Z" expectedDuration="PT60S"
order="1248">
<AltID description="ProviderAdId">1208985499.M1+F9w</AltID>
<AltID description="Ad-ID" type="Ad-ID">ZAPQ0004000H</AltID>
<Apply>
<Policy xlink:href="network.com/FRED/policy/CondLin123"/>
</Apply>
<MatchSignal schema="https://projectoar.org/schemas/vast_extensions1.0.xsd">
<Assert>/OAR/Watermark/PublisherId[text()='101']</Assert>
<Assert>/OAR/Watermark/Match/Equals/Bytes[text()='0000fafa01']</Assert>
</MatchSignal>
<MatchSignal schema="https://projectoar.org/schemas/vast_extensions1.0.xsd">
<Assert>/OAR/Watermark/PublisherId[text()='101']</Assert>
<Assert>/OAR/Watermark/Match/Equals/Bytes[text()='00000056ce']</Assert>
</MatchSignal>
<MatchSignal>
<Assert>/SpliceInfoSection/SpliceInsert[@spliceEventId = 1267985422]</Assert>
</MatchSignal>
<MatchSignal>
<Assert>/SpliceInfoSection/SegmentationDescriptor[@segmentationEventId = 1237985499 and
@segmentationTypeId = 48]/SegmentationUpId[@segmentationUpIdType = 9 and
text()='0x000000343395ded8']</Assert>
</MatchSignal>
</MediaPoint>
```

## 9. Allocation Element schema

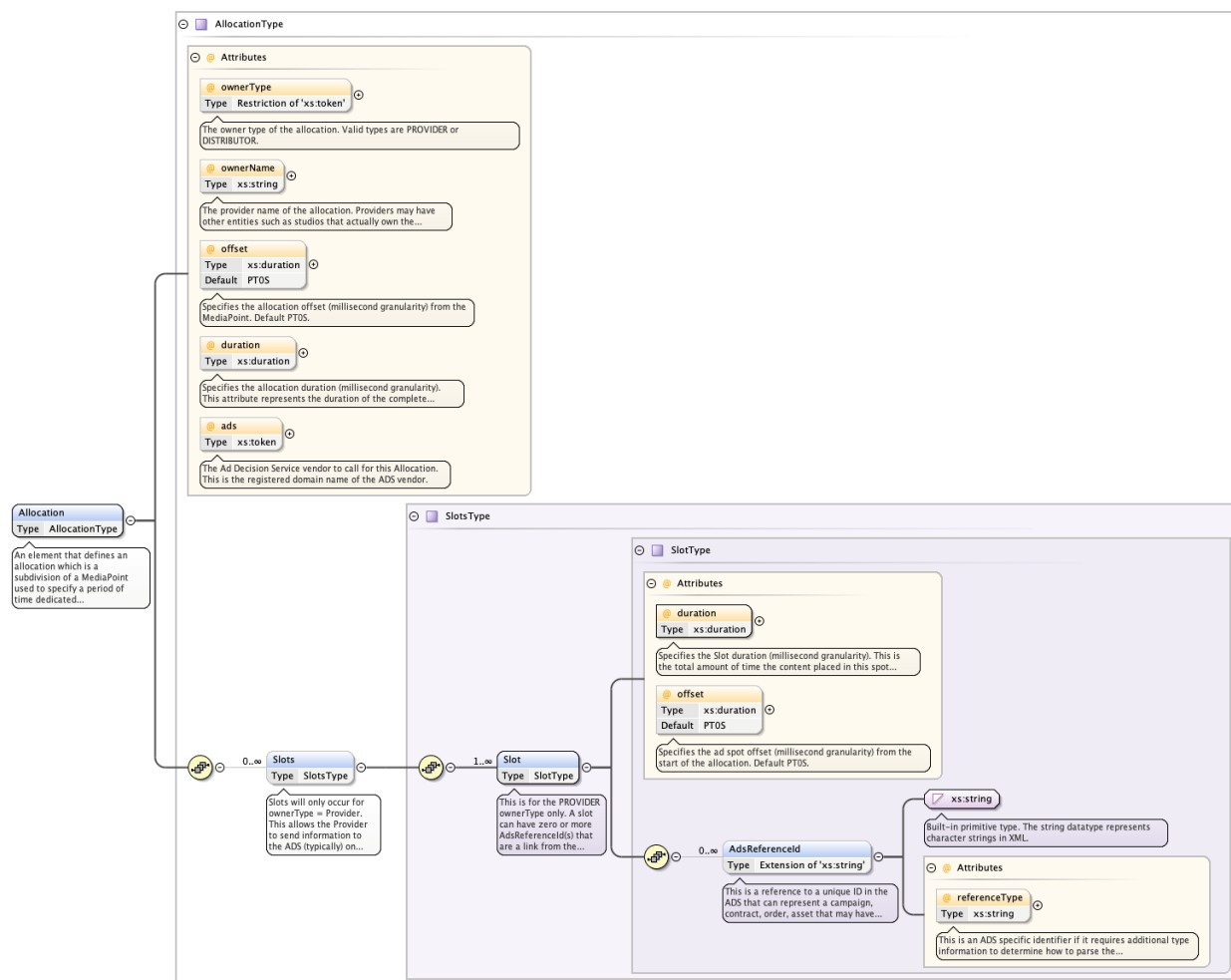


Figure 1 – Allocation element

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns="urn:scte:224:addressable" xmlns:xs="http://www.w3.org/2001/XMLSchema"
  xmlns:esni="http://www.scte.org/schemas/224" targetNamespace="urn:scte:224:addressable"
  xmlns:audience="http://www.scte.org/schemas/224/audience" elementFormDefault="qualified">
  <xs:element name="Allocation" type="AllocationType">
    <xs:annotation>
      <xs:documentation>An element that defines an allocation which is a subdivision of a MediaPoint used to specify a period of time dedicated to a particular owner (provider, distributor, or media buying agency) and an Dynamic Ad Insertion (DAI) sales model. An allocation can be further subdivided into Slots to indicate specific segments of time into which an addressable ad can be scheduled. If there are no Slots, then the entire allocation is treated as an aggregation opportunity.</xs:documentation>
    </xs:annotation>
  </xs:element>
  <xs:complexType name="AllocationType">
    <xs:sequence>
      <xs:element name="Slots" type="SlotsType" maxOccurs="unbounded" minOccurs="0">
        <xs:annotation>
          <xs:documentation>Slots will only occur for ownerType = Provider. This allows the Provider to send information to the ADS (typically) on how it requires the Allocation to be utilized.</xs:documentation>
        </xs:annotation>
      </xs:element>
    </xs:sequence>
    <xs:attribute name="ownerType">
      <xs:annotation>
```

```

    <xs:documentation> The owner type of the allocation. Valid types are PROVIDER or DISTRIBUTOR. </xs:documentation>
  </xs:annotation>
  <xs:simpleType>
    <xs:restriction base="xs:token">
      <xs:pattern value="PROVIDER|DISTRIBUTOR"/>
    </xs:restriction>
  </xs:simpleType>
</xs:attribute>
<xs:attribute name="ownerName" type="xs:string">
  <xs:annotation>
    <xs:documentation>The provider name of the allocation. Providers may have other entities such as studios that actually own the allocation. This is not
    valid for a Distributor type as the Provider is not instructing the Distributor as to the allocation ownership.</xs:documentation>
  </xs:annotation>
</xs:attribute>
<xs:attribute name="offset" type="xs:duration" default="PT0S" use="optional">
  <xs:annotation>
    <xs:documentation> Specifies the allocation offset (millisecond granularity) from the MediaPoint. Default PT0S. </xs:documentation>
  </xs:annotation>
</xs:attribute>
<xs:attribute name="duration" type="xs:duration">
  <xs:annotation>
    <xs:documentation>Specifies the allocation duration (millisecond granularity). This attribute represents the duration of the complete addressable
    opportunity for this allocation.
  </xs:documentation>
  </xs:annotation>
</xs:attribute>
<xs:attribute name="ads" type="xs:token">
  <xs:annotation>
    <xs:documentation>The Ad Decision Service vendor to call for this Allocation. This is the registered domain name of the ADS
    vendor.</xs:documentation>
  </xs:annotation>
</xs:attribute>
</xs:complexType>
<xs:complexType name="SlotsType">
  <xs:sequence>
    <xs:element maxOccurs="unbounded" name="Slot" type="SlotType">
      <xs:annotation>
        <xs:documentation>This is for the PROVIDER ownerType only. A slot can have zero or more AdsReferenceId(s) that are a link from the PROVIDER
        to the ADS as to the allowed campaigns, contracts, orderlines or assets along with addressable information that can be run in this position. The content
        referenced in the AdsReferenceId typically is cleared for various rules on what ads can play in that space including seperation, kidvid, etc. If no AdsReferenceId
        is specified then the ADS treats this as the provider requires an ad of this duration to be run in the slot using aggregation.</xs:documentation>
      </xs:annotation>
    </xs:element>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="SlotType">
  <xs:annotation>
    <xs:documentation/>
  </xs:annotation>
  <xs:sequence>
    <xs:element name="AdsReferenceId" minOccurs="0" maxOccurs="unbounded">
      <xs:annotation>
        <xs:documentation>This is a reference to a unique ID in the ADS that can represent a campaign, contract, order, asset that may have various
        addressable attributes. </xs:documentation>
      </xs:annotation>
    </xs:element>
  </xs:sequence>
  <xs:simpleContent>
    <xs:extension base="xs:string">
      <xs:attribute name="referenceType" type="xs:string">
        <xs:annotation>
          <xs:documentation>This is an ADS specific identifier if it requires additional type information to determine how to parse the
          adsReferenceId.</xs:documentation>
        </xs:annotation>
      </xs:attribute>
    </xs:extension>
  </xs:simpleContent>
</xs:complexType>
</xs:element>
</xs:sequence>
<xs:attribute name="duration" use="required" type="xs:duration">

```

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```
<xs:annotation>
  <xs:documentation>Specifies the Slot duration (millisecond granularity). This is the total amount of time the content placed in this spot will take to play
out.
  </xs:documentation>
</xs:annotation>
</xs:attribute>
<xs:attribute name="offset" use="optional" type="xs:duration" default="PT0S">
  <xs:annotation>
    <xs:documentation>Specifies the ad spot offset (millisecond granularity) from the start of the allocation. Default PT0S. </xs:documentation>
  </xs:annotation>
</xs:attribute>
</xs:complexType>
</xs:schema>
```