Comcast Use of SCTE Standards

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# General Application of SCTE-224

- Regional blackout

  - Provider announces content that is subject to blackout based on geographic constraints. An action is prescribed to replace with alternate content or a slate.

- Ad insertion

  - Provider announces ad splice opportunities. An action is prescribed based upon operator, location, device type, replacement ad type.

- Device based restriction

  - The provider announces an airing subject to be shown on devices or device classes.

- Linear schedule

  - Provider announces upcoming schedule for linear airings (days or weeks in advance). The schedule includes nominal start time and duration. Includes signal matching criteria and associated descriptive metadata.

Centralized Blackout Control MVPD
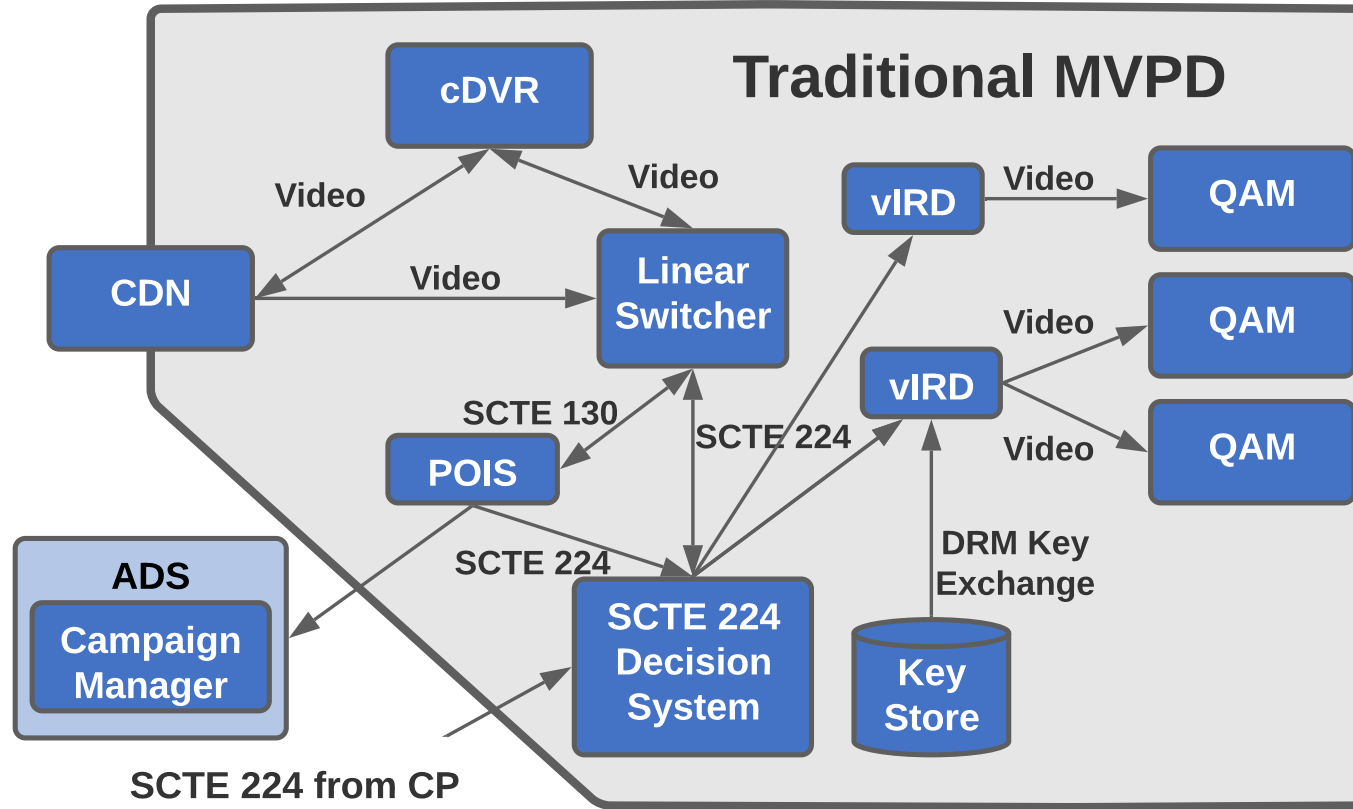
Centralized Blackout Control dMVPD
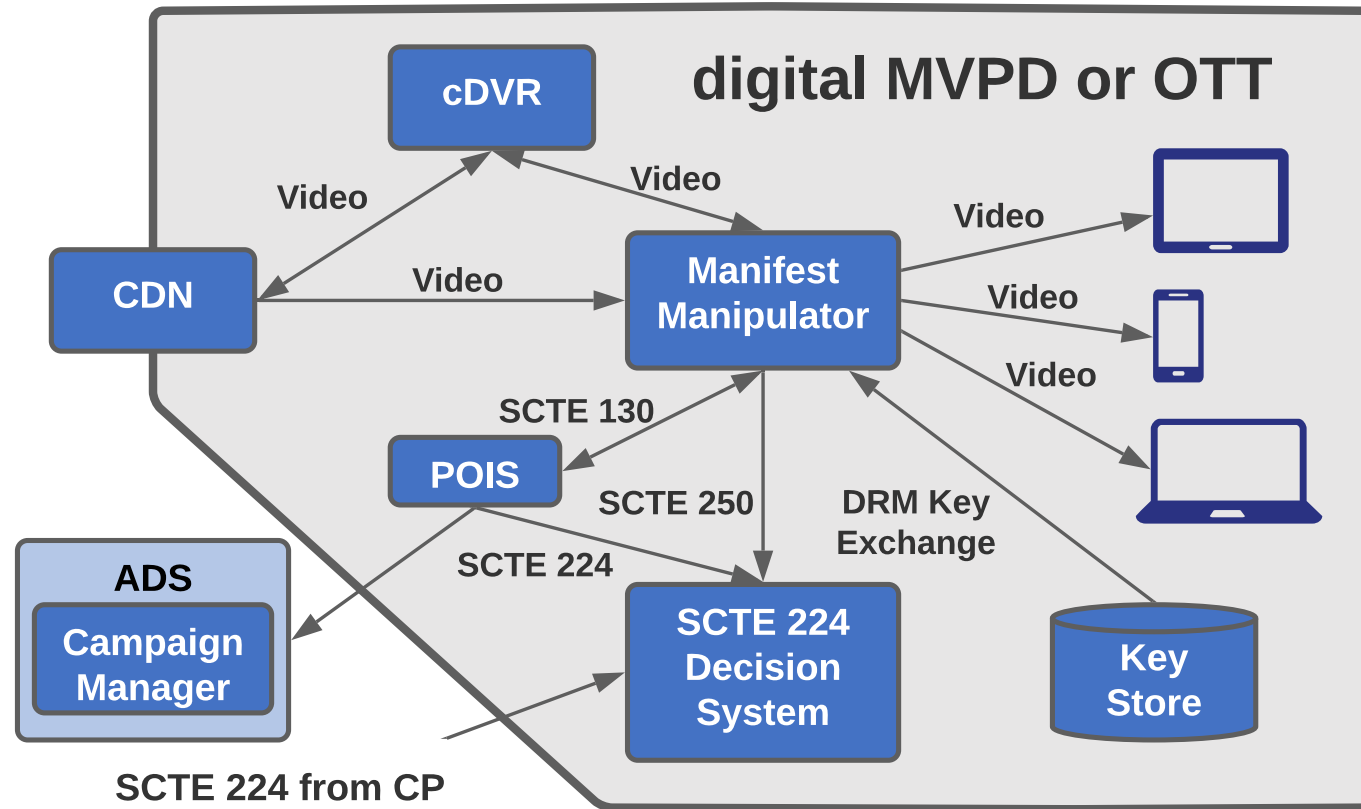
Blackout Control Use Case – Syndication Partner

- InDemand (Game1-14 and Team1-10) consist of **24** channels of content (plus slate channels for blackouts)

- Partner has **29** DMAs for each of these channels resulting in a total of **696** regionalized versions of content

- Centralizing content acquisition (with geo-redundant processing centers), would require a total of **1392** video transcoding instances and associated channels

- The use of SCTE-224 metadata and SCTE-35 tags dramatically reduces the required quantity of video transcoder instances and the number of distributed channels to a total of only **52** (redundant content)

- For video QAM delivered content, the linear stream switchers (LSS) at the market level control the required switching between content and slate in a blacked-out region

- For IPTV content, the server-side manifest manipulator provides the required blackout control for the client based upon its location
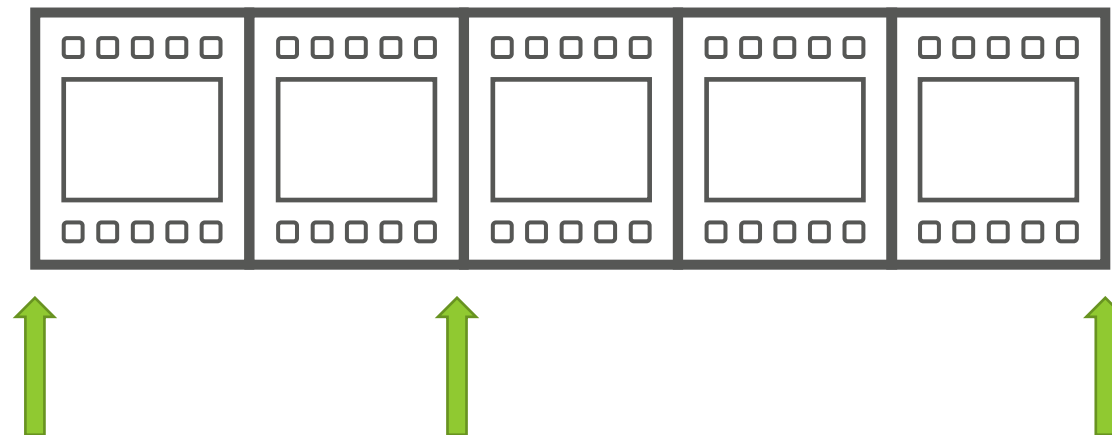
SCTE 35 - Digital Program Insertion Cueing Message for Cable

- Standard that describes the inline insertion of cue tones in mpeg-ts streams.

- It is used to signal all kinds of program and ad events in linear transport streams and in ABR formats.

- Provides frame accurate signaling to encoders, packagers, and manifest manipulators

SCTE 224 – Event Scheduling and Notification Interface (ESNI)

- Standard that manages the out of band metadata for video playout rights

- Out of band means that if has nearly unlimited space for carrying policies

- Key is the audience associated with each playout right

- Numerous "Actions" for each playout scenario

SCTE 250 – Real-time Event Signaling and Management API

- ESAM defines a standardized mechanism for a Signal Acquisition System(s) (SAS) to communicate with with Signal Decisioning System(s) (SDS)

- SAS can be multitude of devices (i.e., encoder, transcoder, packager, stream switcher, etc.)

- SDS is typically a Placement Opportunity Information System (POIS) or a SCTE 224 Decision Engine

- Signaling is the SCTE 35 in-band signaling seen by the SAS in the video stream

- Instructions are the SCTE 224 out-of-band metadata

SCTE 224 – Constructs

5 types of messages

Media
- Represents a channel (i.e., CHX)
- Container for MediaPoints

MediaPoints
- Represents event or point within that channel (i.e., Program Start)
- Activated by matching time or matching in-band

Policy
- Container for ViewingPolicy
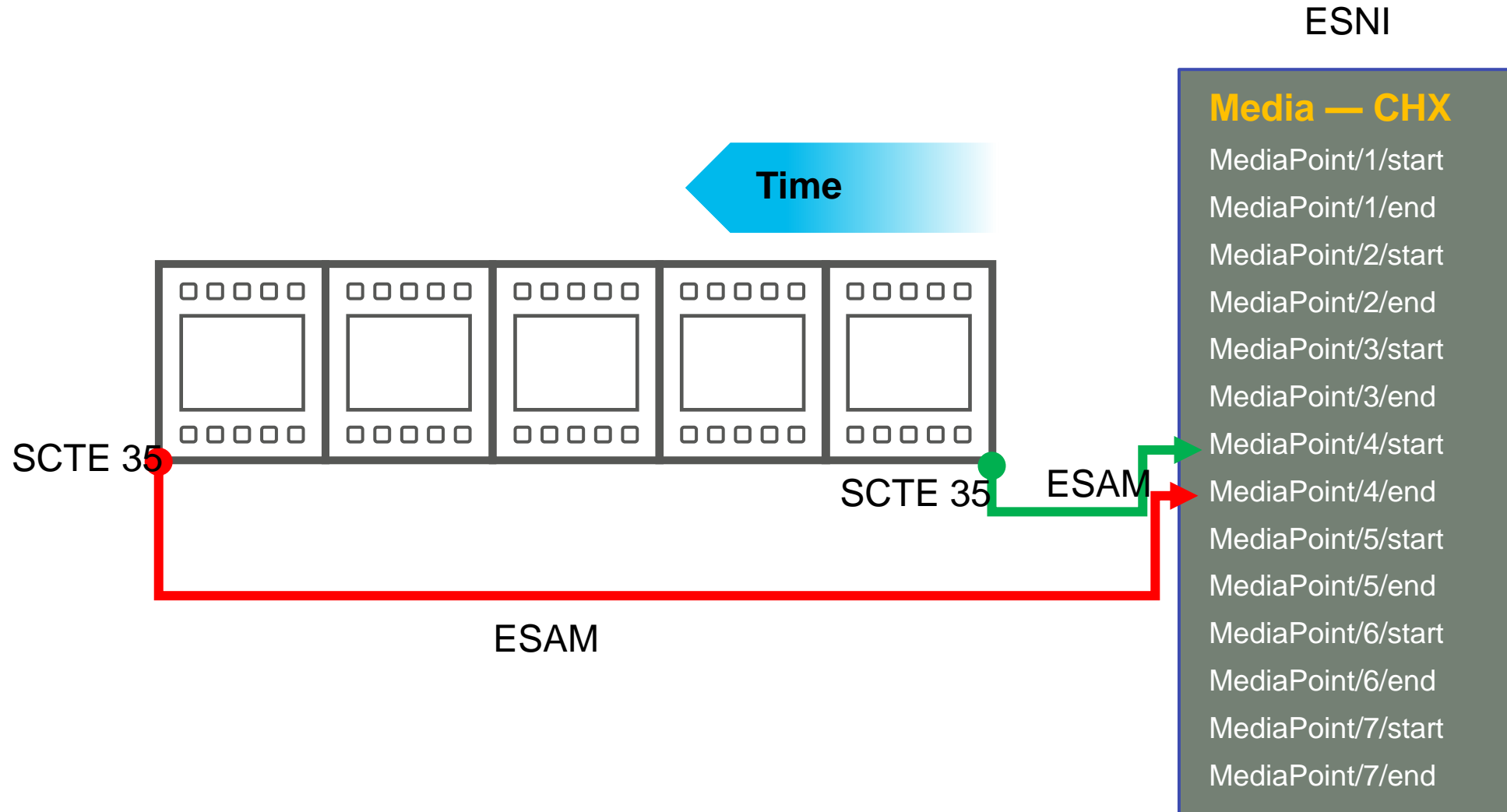
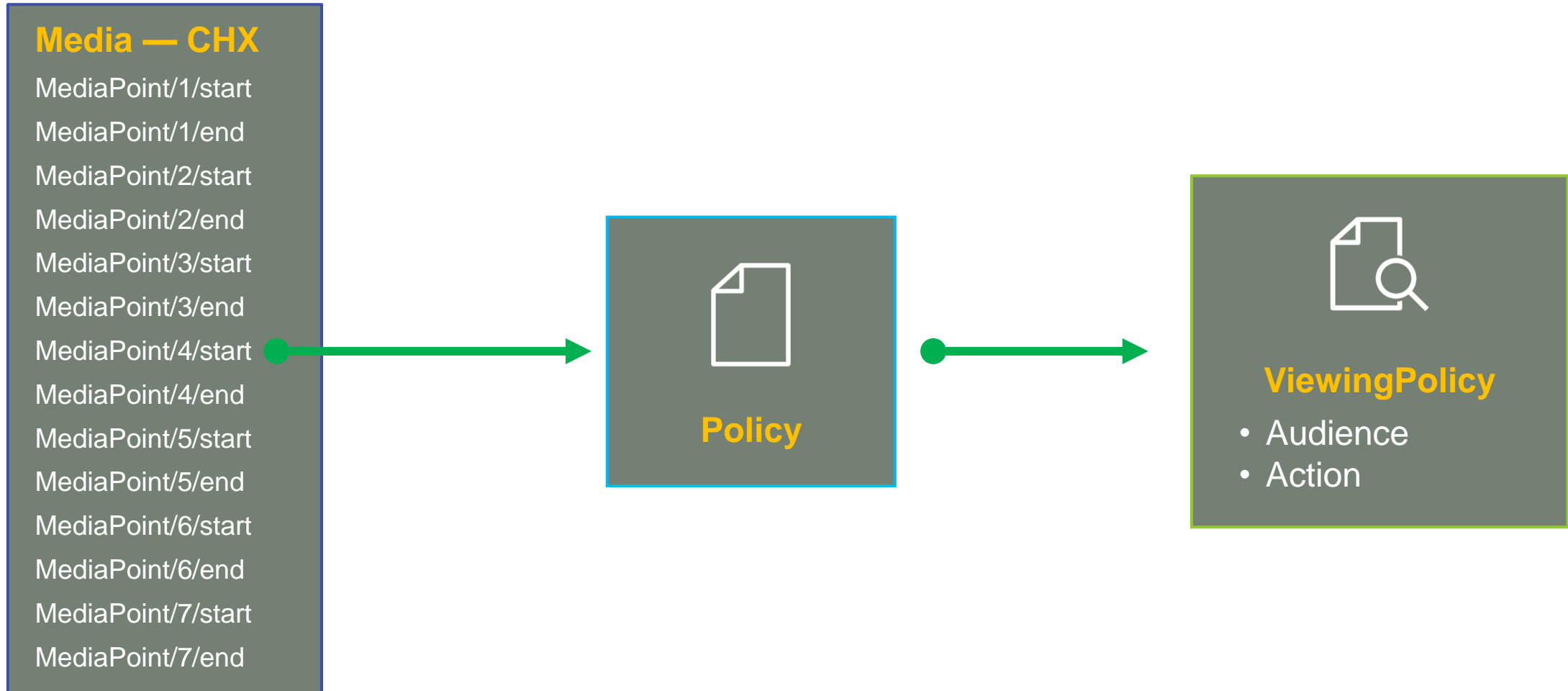**ViewingPolicy**
- Combines Audience with action

Audience
- Group you want to take the ViewingPolicy "action" (i.e., ZIP code or Device)
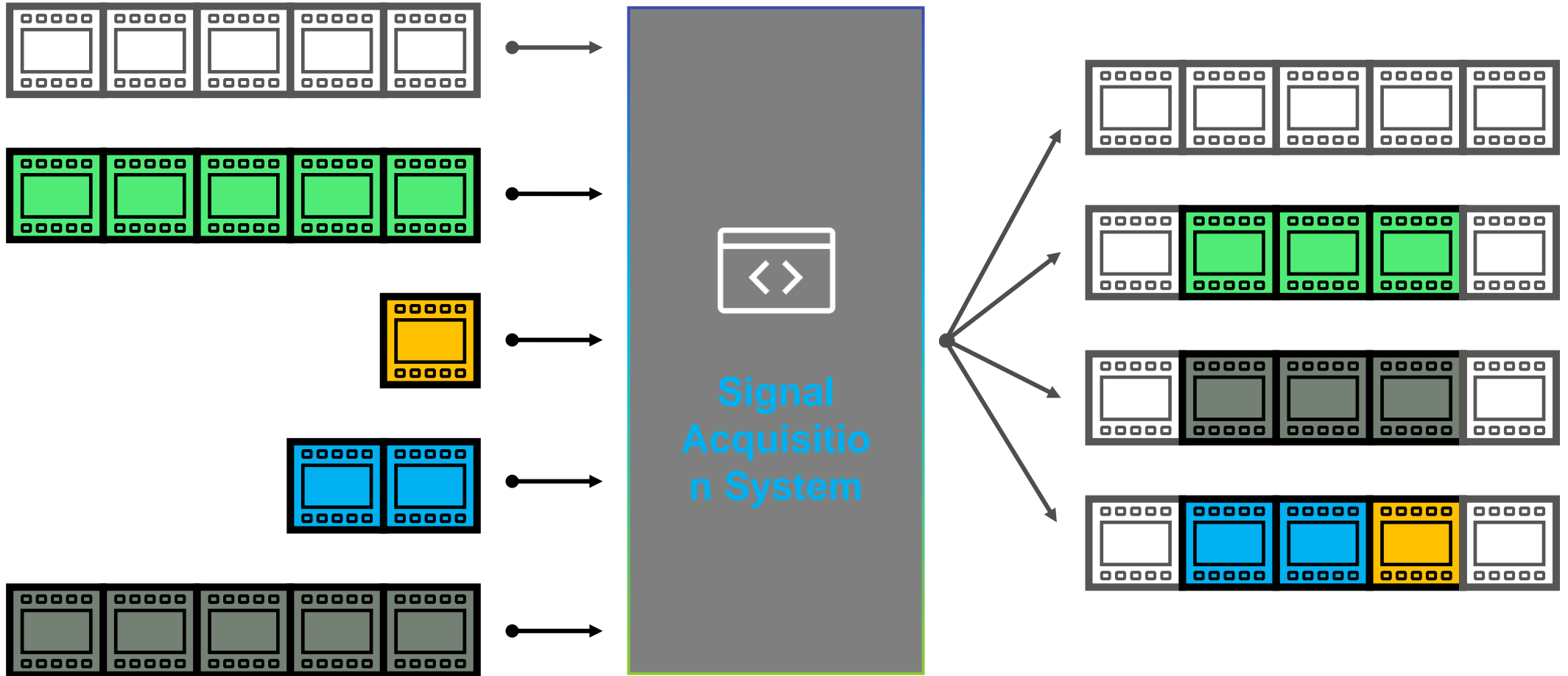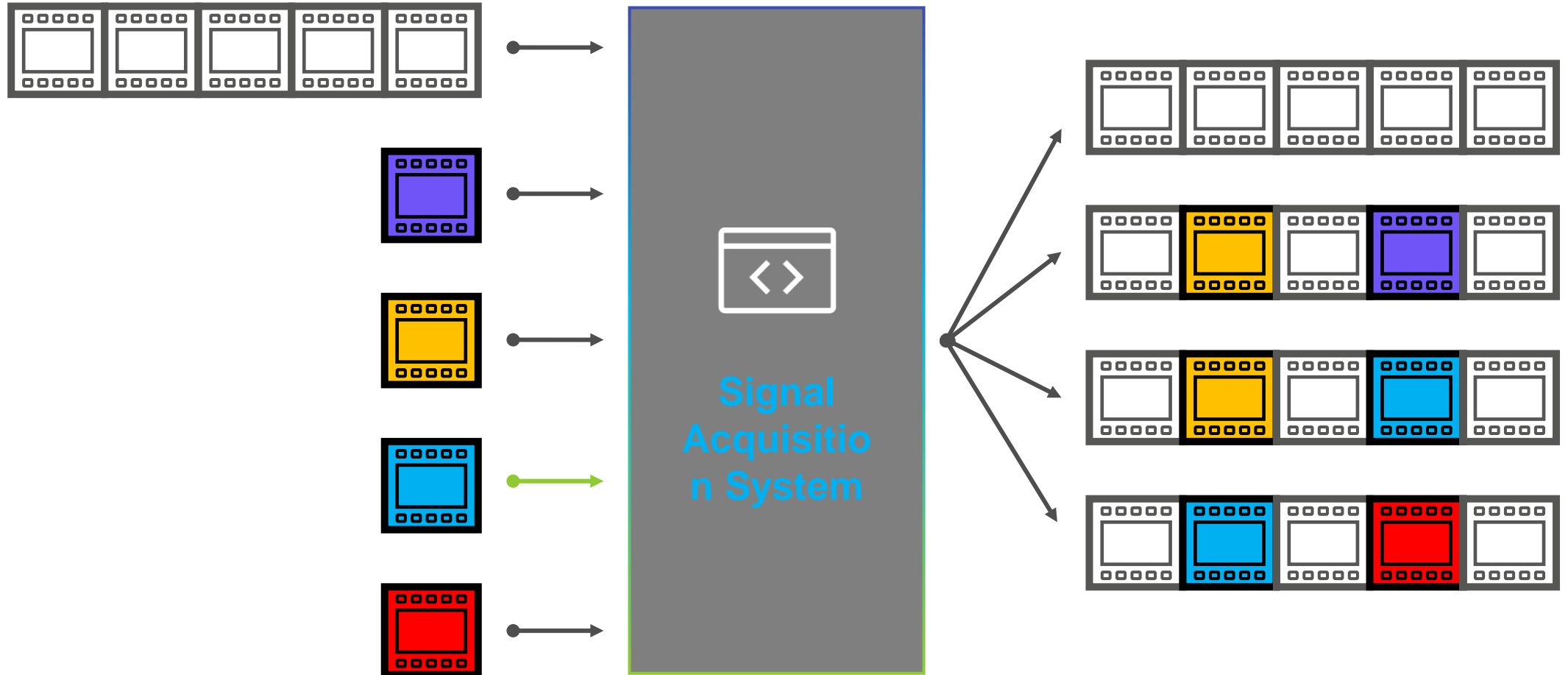
SCTE 224 – Constructs

SCTE 224 – Constructs

Media — CHX

MediaPoint/1/start

MediaPoint/1/end

MediaPoint/2/start

MediaPoint/2/end

MediaPoint/3/start

MediaPoint/3/end

MediaPoint/4/start

MediaPoint/4/end

MediaPoint/5/start

MediaPoint/5/end

MediaPoint/6/start

MediaPoint/6/end

MediaPoint/7/start

MediaPoint/7/end

Policy

ViewingPolicy

- Audience
- Action

SCTE 224 – Blackout

ViewingPolicy
- Audience
- Action

SCTE 224 – Alternate Content

Signal Acquisition System

SCTE 224 – Regionalization

SCTE 224 – Advertising

MVPD XYZ – Target
advertisement opportunity

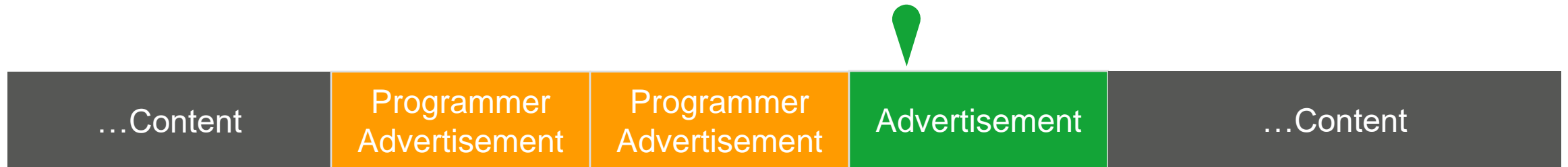| …Content | Programmer Advertisement | Programmer Advertisement | Advertisement | …Content |
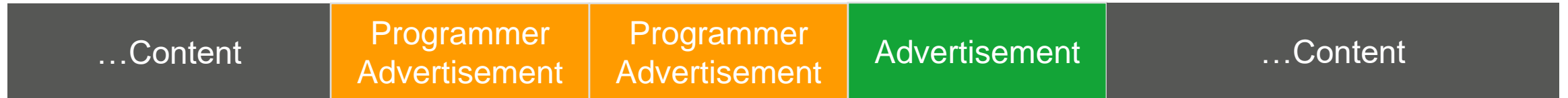
MVPD ABC – No opportunity,
plays baked in advertisement

SCTE 224 – Advertising

MVPD XYZ – Target
advertisement opportunity

...Content	Programmer Advertisement	Programmer Advertisement	Advertisement	...Content

Ad inclusion roles:
- Truck advertisement

Ad exclusion rules:
-   No Pepsi advertisements
-   No fast food advertisements

SCTE 224 – Advertising

MVPD XYZ – Target advertisement opportunities

| ...Content | Addressable Advertisement | Addressable Advertisement | Addressable Advertisement | ...Content |

Scene-based recommendations
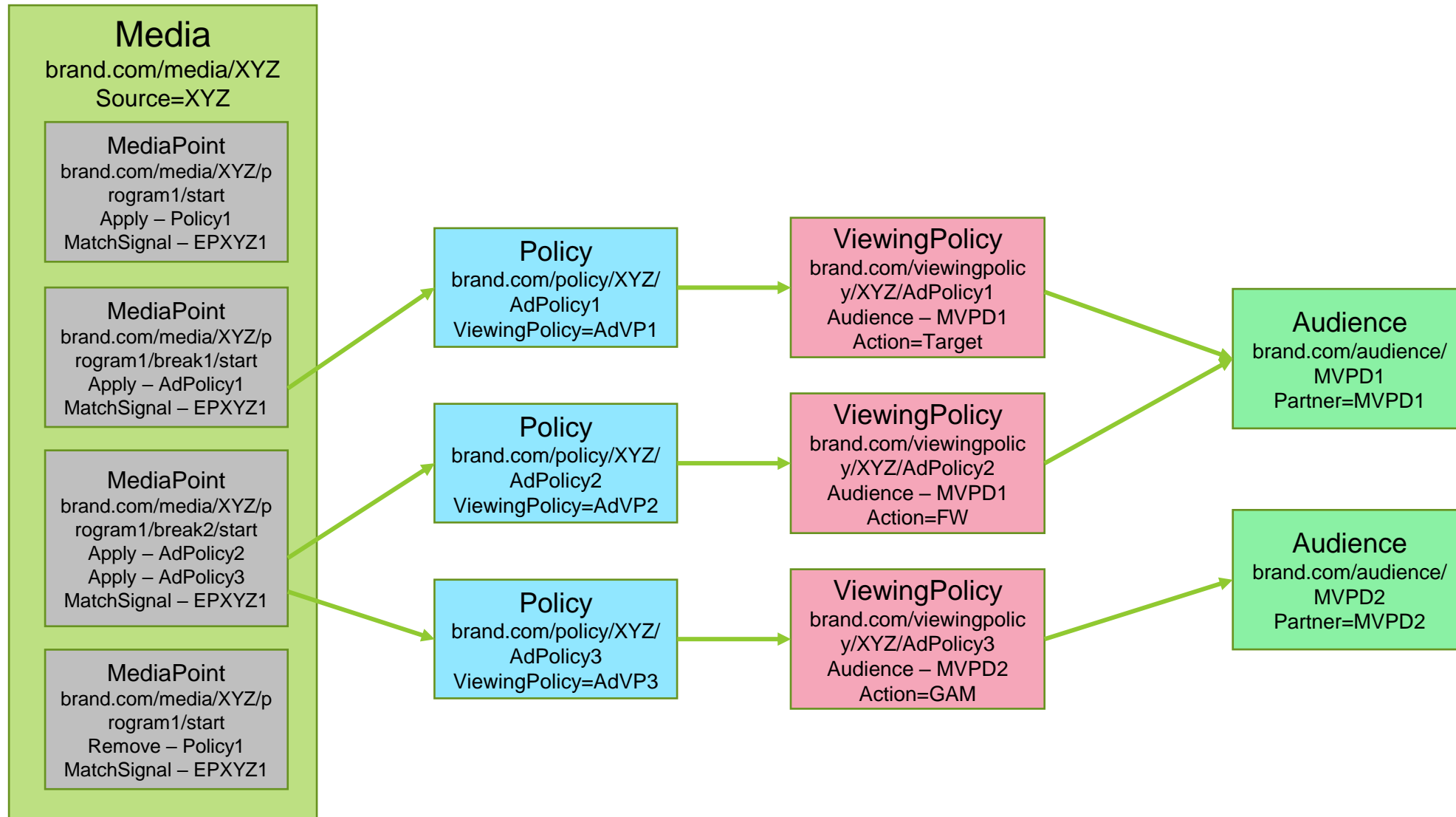
Ad-based recommendations

Ad inclusion roles:
- Truck advertisement

Ad exclusion rules:
- No Brand B advertisements
- No fast food advertisements

SCTE 224 – Advertising

Benefits of Utilizing SCTE 35, SCTE 224, and SCTE 250

- Delivery
    - Reduced equipment
    - Reduced workflows and variants to maintain
- Advertising
    - Addressable Ad Slots can be identified different for different operators
    - Different Ad Decisioning Systems for different operators
    - Inclusion and exclusion rules conveyed machine-to-machine
    - Different inclusion and exclusion rules for different operators
    - Enriching metadata about the advertisements or the scenes leading up to the slot to create more intelligent ads