# MediaKind PRISMA Core

## Bridging the gap between content providers and services providers

When it comes to managing contractual and legal obligations such as **blackout/alternate content and legally mandated program substitution** delivering content has become increasingly complex for operators especially given the increasing rise of 2nd screen devices.

PRISMA core has been designed to provide a convergent solution, enabling such **rules enforcement for traditional broadcast, as well as OTT-based delivery**.
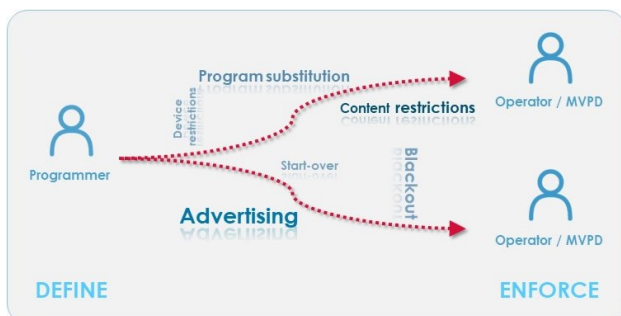


## Advanced scheduling control

PRISMA core has been designed for operators and service providers, with the following objectives in mind:

- **Build an interface to content partners** with SCTE-224 ingest, while providing the ability to ingest legacy or proprietary schedule files.

- Convert ingested schedule into control and commands, leveraging **industry standard such as CableLabs ESAM** and third-party interoperability.

- **Leverage SCTE-35** signaling to control your video head-end, with advanced fallback mechanisms

- **Convergent platform** to meet expectations for traditional broadcast and OTT delivery.

PRISMA Core integrates onto your video head-end to enable a variety of applications such as:

- **Blackout & alternate content management**

- **Placement control** via SCTE-35 insertion, rewriting, and manifest conditioning to convey SCTE-35 placement opportunities for OTT delivery

- **Linear Ad replacement**

- **Advanced graphics**, image overlay, and **EAS** when coupled with MediaKind Encoding Live

## Normalizing Programming Events Ingest schedule

Blackout, alternate content switch-over, linear ad replacement, program substitution etc. are programming events operators need to fulfill/enforce either contractually, by law, or for ad inventory monetization.

PRISMA core implements a **flexible ingest schedule API**, enabling a variety of schedule ingests, starting with SCTE-224, the core foundation, and also our pivot format regardless of the ingest. In addition to **SCTE-224**, PRISMA support file-based ingest (**.csv, CCMS, BXF**), **ESNI I02**, as well as interface to **third-party automation system**.

## Placement Management

Although events can be triggered time-based, the industry is considering SCTE-35 signaling to manage so called "placement opportunity" (be it program start/end, ad break, etc.).

PRISMA Core provides a solution to programmers with no SCTE-35 signaling capabilities by interfacing with their playout system and **control SCTE-35 insertion for ad break signaling**.

For operators, PRISMA Core can **normalize received SCTE-35** to cope with the variety of sources and formats, or used for signaling **blackout opportunity**.

**Manifest conditioning** is fully implemented, providing operators with a first important step in their monetization and blackout/alternate content strategy.

## Blackout and Alternate Content

From ingested schedule describing blackout or alternate content, PRISMA Core provides operators with an holistic solution to manage cross-screen delivery restrictions:

- **Channel-based blackout or content switching**, Interfacing with ESAM-compatible Encoders or TS Processors.

- **Audience-based blackout** when used in conjunction with PRISMA Edge (targeted manifest manipulation) or 3rd party.
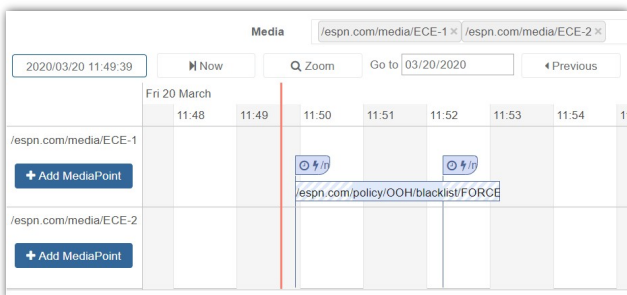
## Linear Ad Insertion, Dynamic Ad Insertion

Combined with MediaKind Media Processing, Delivery & TV Platform portfolio, PRISMA core provides a compact solution to manage **central and regional linear ad replacement**.

When coupled with PRISMA Edge, it provides the necessary **manifest conditioning for server-side ad insertion**.
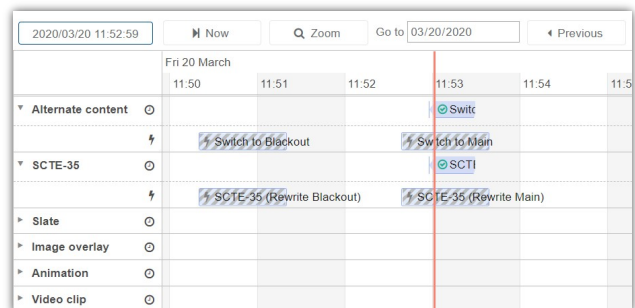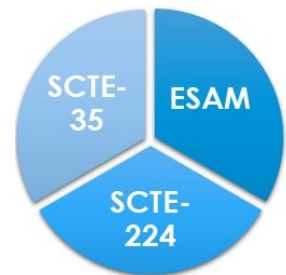
## Further Applications

PRISMA Core is tightly integrated with MediaKind Encoding Live, enabling scheduling and control of advanced applications such as:

- **EAS:** Emergency Alert System (EAS) with SCTE-18 ingest support.

- **Crawling text insertion and animation:** Advanced graphics support (with MediaKind Encoding Live).

- **Logo, Image overlay:** uniquely supported with MediaKind Encoding Live.

- **Content playout:** create simply canned channels.

## Leveraging the Standards

PRISMA core has been designed around industry standards:

- **SCTE-224:** native ingest, as well as the way we store events regardless of the ingest type of format. Those events define **WHAT** will happen.

- **SCTE-35**: this in-band signaling defines **WHEN** a potential event may happen.



- **ESAM:** CableLabs ESAM interface normalizes **HOW** encoders, TS processors, and packagers interface with so-called "POIS" component like PRISMA core.

# Programming & Schedule Events Ingest

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| **Ingest Format** | **ESNI SCTE-224**: Native PRISMA core ingest. Allows ingest of Audience, Viewing Policy, Policy, Media and Media Point data from content providers. Can be manually configured.<br>**ESNI I02**: Ingest compatible ESNI I02.<br>**File-based ingest**: .<br>• .csv File ingest<br>• BXF: automate events identification, and map over SCTE-224 policies<br>• CCMS: ad schedule file ingest for linear ad replacement applications<br>**SCTE-18**: ingest of Emergency Alert System information for downstream control<br>**Playout System**: Integration with third-party playout system to retrieve programming events in real time. |
| **Events storage** | All events/schedule is normalized and stored using SCTE-224 data model |

# Operations & Controls

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| **SCTE-35 Management** | Advanced placement opportunity management enabling:<br>• SCTE-35 confirmation, rewriting, modification<br>• SCTE-35 injection/insertion (out-of-band) |
| **Alternate Content Management** | Live-to-live, live-to-slate control depending on encoder/TS processor ESAM capabilities. |
| **Playlist control** | Control playout from ingested playlist (only available when used in combination with MediaKind Encoding Live) |
| **Advanced graphics** | Crawling text, animating, logo, image overlay schedule control (with MediaKind Encoding Live) |
| **Schedule and Signal-based triggering** | Above operations can be triggered in different ways:<br>• Time-based<br>• Signal-based (triggered based upon SCTE-35 signal with matching criteria)<br>• Signal-based / fallback to time (SCTE-35 expected, but not present, fallback to out-of-band operations triggering<br>Automate triggering based on SCTE-224 schedule, with possibility to force operations based on time and or SCTE-35 reception (deviate from SCTE-224). |
| **Manifest conditioning** | Manifest conditioning compatible ESAM-MCC:<br>• HLS, DASH and HSS compatible<br>• SCTE-35 filtering to differentiate placement opportunities and conditioning<br>• Fully customize-able tags and conditioning based on SCTE-35 input data |
| **Communication Interfaces** | ESAM, SCTE-30/104 |

## Monitoring and Control

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| **Control Interface** | Control and monitoring via Web GUI. Timeline of provisioned events and operations on a per service level. Fully configure-able using REST-API |
| **Redundancy Management** | N+M redundancy scheme |

## Compatible Deployment Models

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| **Software Only** | Supported on Linux CentOS 7.3 and 7.6 |
| **Deployment** | PRISMA Core is integrated into MediaKind deployment framework as containers |