Charter Blackout Implementation

July 2019

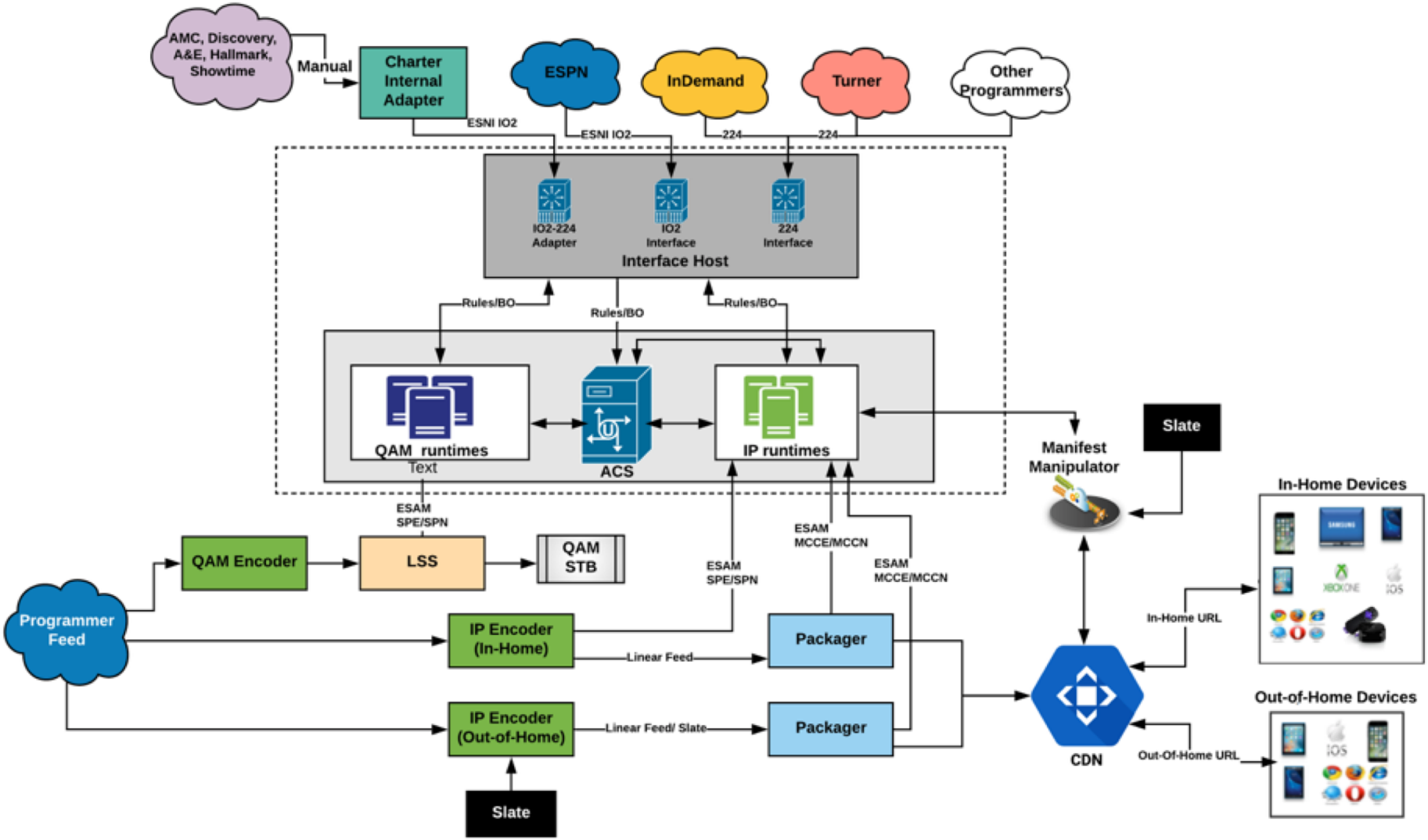
Overview

- Supporting Blackouts using SCTE 224 and ESNI I02.
- Challenges.
- How to ensure better interoperability for SCTE 224?
- Future Directions.

Spectrum use cases for Blackout

- *Overall Objectives*
  - *Geo based restrictions for the QAM distribution plant.*
  - *Geo based restriction for IP-ABR live streaming platform for Title 6 stream.*
  - *Blackout or Geo based restriction for IP-ABR live streaming platform for out of home consumption that could be based on geo location.*
- *Programmer Signal Delivery*
  - *In-band (SCTE35).*
  - *Out-of-Band (Time-based) based signaling/triggering of events.*
  - *Both In-band and Out-of-Band using SCTE-224.*
- *Operation Requirements*
  - *Operational level monitoring of the platform.*
  - *Audit/Validation for execution of events that can be shared with programmer.*
  - *Linearly Scalable platform with support for failover/resiliency.*

Blackout Design/Architecture



Challenges

- SCTE 224 Issues
  - How to implement Blackout event for both QAM and IP using different audience?
  - No implicit definition of Program Start/Program End in SCTE 224.
  - How to convert media points to appropriate ESAM messages for both DCM and Encoders.
  - Very widely open schema with no restrictions. Many elements marked optional.
  - Audit interface lack definition.

Future Directions/Recommendations/Next Steps

- SCTE 224 Inter-operability Guidelines.
- Standardize SCTE-224 by restricting Schema or with more guidelines.
- Support wider adoption of SCTE 224.
- Clarify architecture/integration between SCTE 250 and 224.