

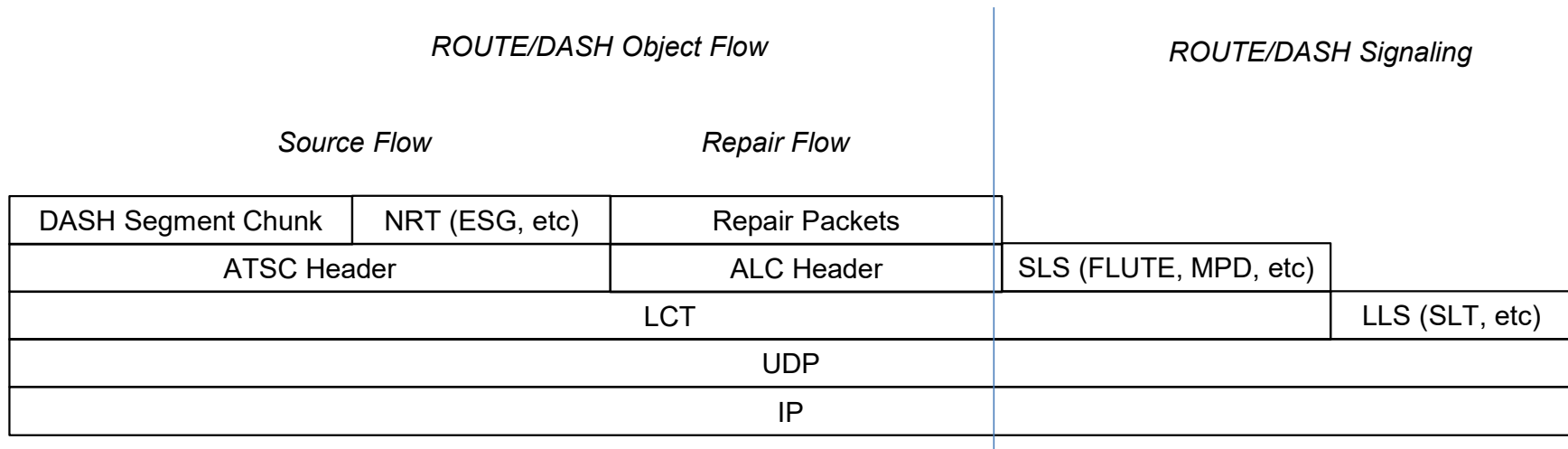
ATSC 3 ROUTE/DASH Introduction

3 June 2022

Agenda

- Broadcast Protocol Stack
- Signaling Summary
- Broadcast vs Broadband
- Deployment
- Next Steps for ATSC ROUTE/DASH

Broadcast Protocol Stack (simplified)



Signaling Summary

- Low Level Signaling (LLS) - ROUTE/DASH independent
 - Service List Table (SLT) – basic info about all services incl “TV”, NRT, ESG, DRM, etc
 - Emergency Information
 - System Time (UTC offset, etc)
 - Etc
- Service Layer Signaling (SLS) – one collection per service
 - DASH MPD
 - Service Transport Sessions (w FLUTE)
 - App Acquisition/Availability
 - Etc

Broadcast vs Broadband

- Configurations for:
 - Broadcast-only (the protocol stack described in this deck, all DASH Segments over broadcast)
 - Broadband-only (signaling broadcast, all DASH Segments over HTTPS)
 - Hybrid (signaling broadcast, DASH Segments split over broadcast and HTTPS)
 - Other (Fallback, Handoff)
- SLS Layer Signaling also/alternatively available over HTTP

Deployment

- On Air – Korea, US, Jamaica
- A number of other countries “soon”
- General Deployment Info: <https://www.atsc.org/nextgen-tv/deployments/>
- US Market and Schedule details: <https://www.rabbitears.info/market.php?request=atsc3>

Next Steps for ATSC ROUTE/DASH

- Mainly CMAF
 - Chunking using LCT-layer signaling in RFC 9223 “Real-Time Transport Object Delivery over Unidirectional Transport (ROUTE)”
 - Align with DASH-IF IOP v5
 - “Upgrade” DASH-IF ATSC IOP to “v5” (doc structure still tbd)