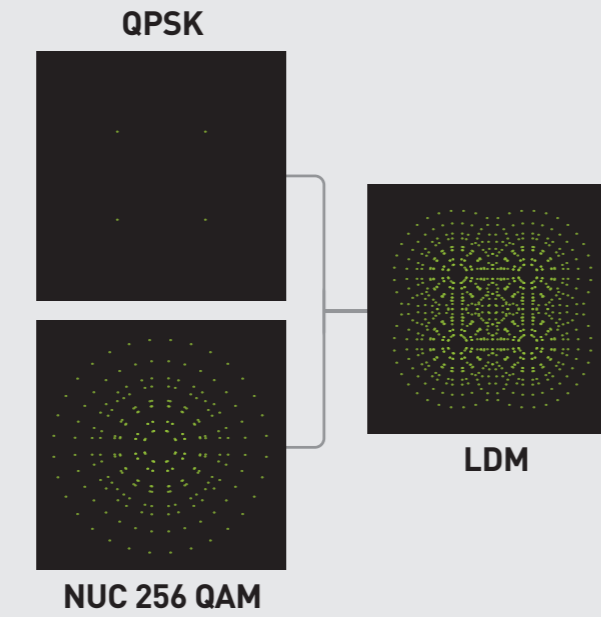


Air interface

Physical overview

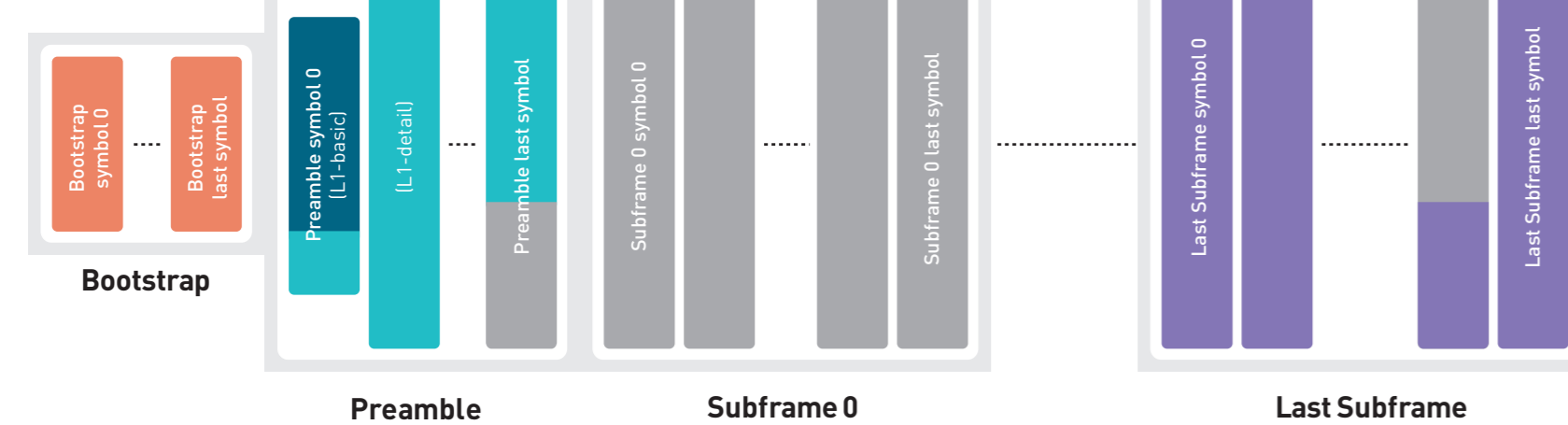
FEC length 16200; 64800
FEC code BCH; CRC + LDPC
Code Rate 2/15; 3/15; 4/15; 5/15; 6/15; 7/15; 8/15; 9/15; 10/15; 11/15; 12/15; 13/15
Constellation QPSK ; NUC 16QAM, 64QAM, 256QAM, 1024QAM, 4096QAM
Transmission mode SISO, MISO, MIMO, Channel bonding
Interleaving Convolutional Time Interleaver; Hybrid Time Interleaver
FFT size 8K; 16K; 32K
Bitrate Max 8Mhz: 78.5Mbps (SISO) - 157Mbps (2x2 MIMO)
 6Mhz: 58.8Mbps (SISO) - 117Mbps (2x2 MIMO)
ATSC 3.0 frame duration from 50ms to 5s
PLP number from 1 up to 64 (min 4 in parallel for demod)
Versatile PLP mapping TDM, FDM, TFDM, LDM, LTDM

LDM injection

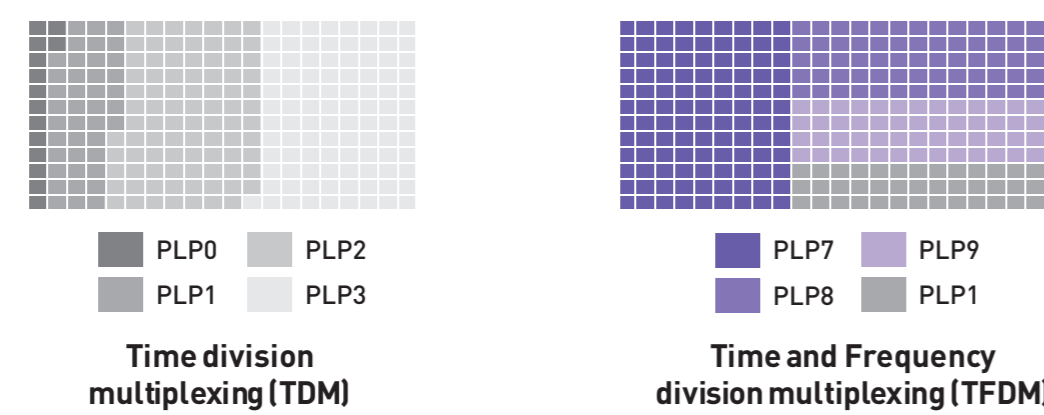


ATSC FRAME

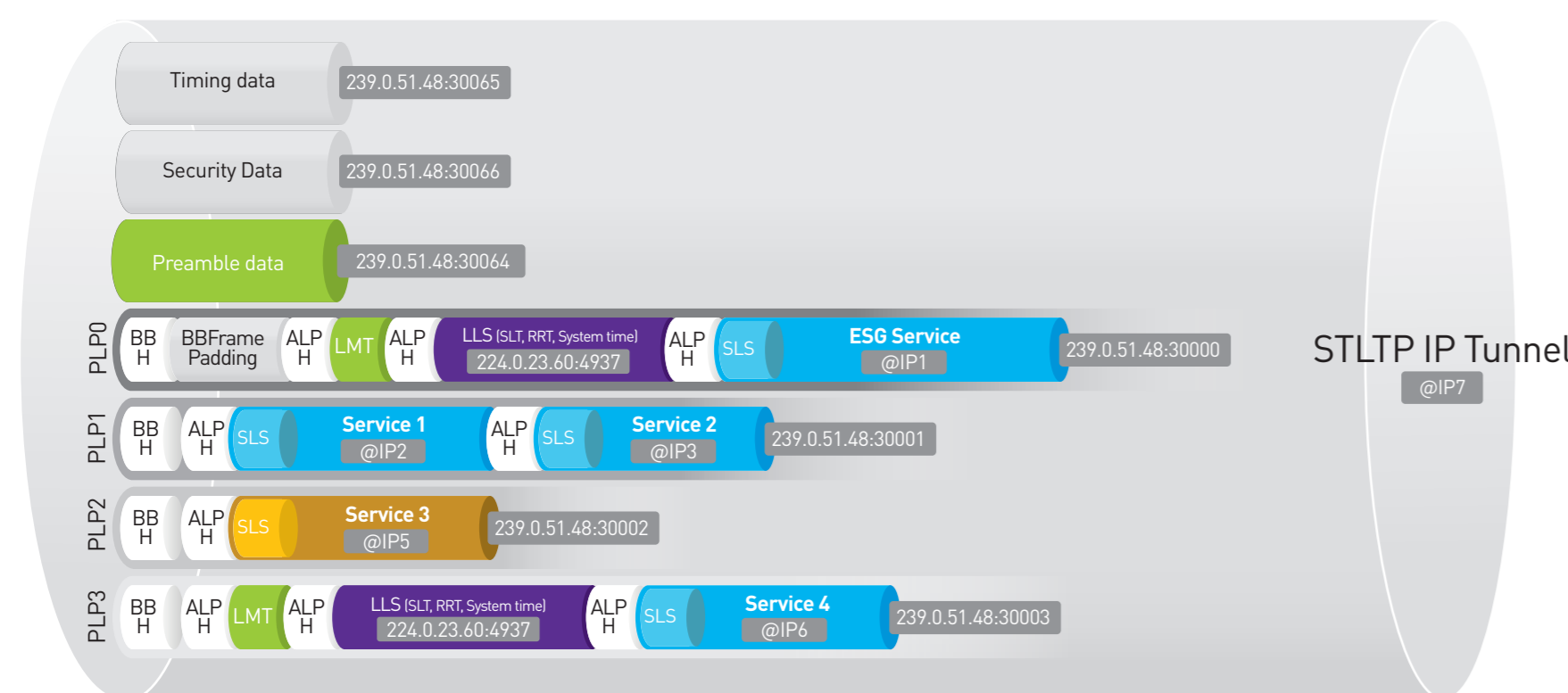
Framing



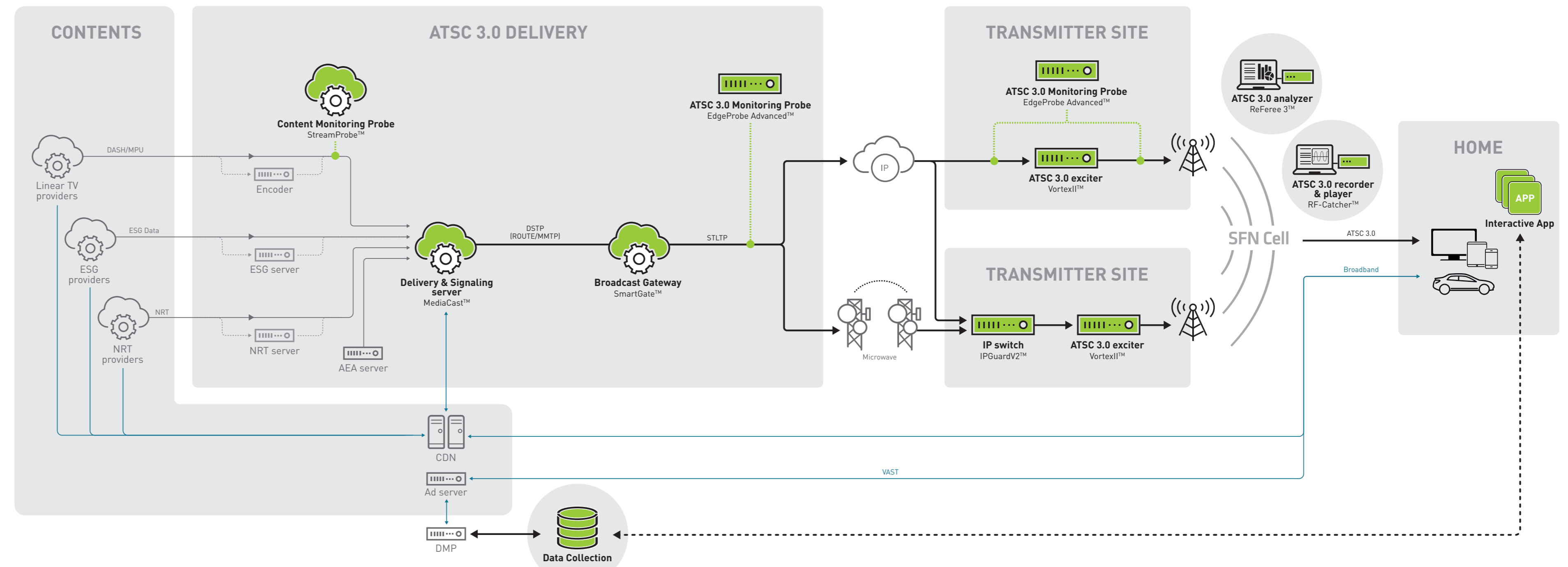
PLP Mapping



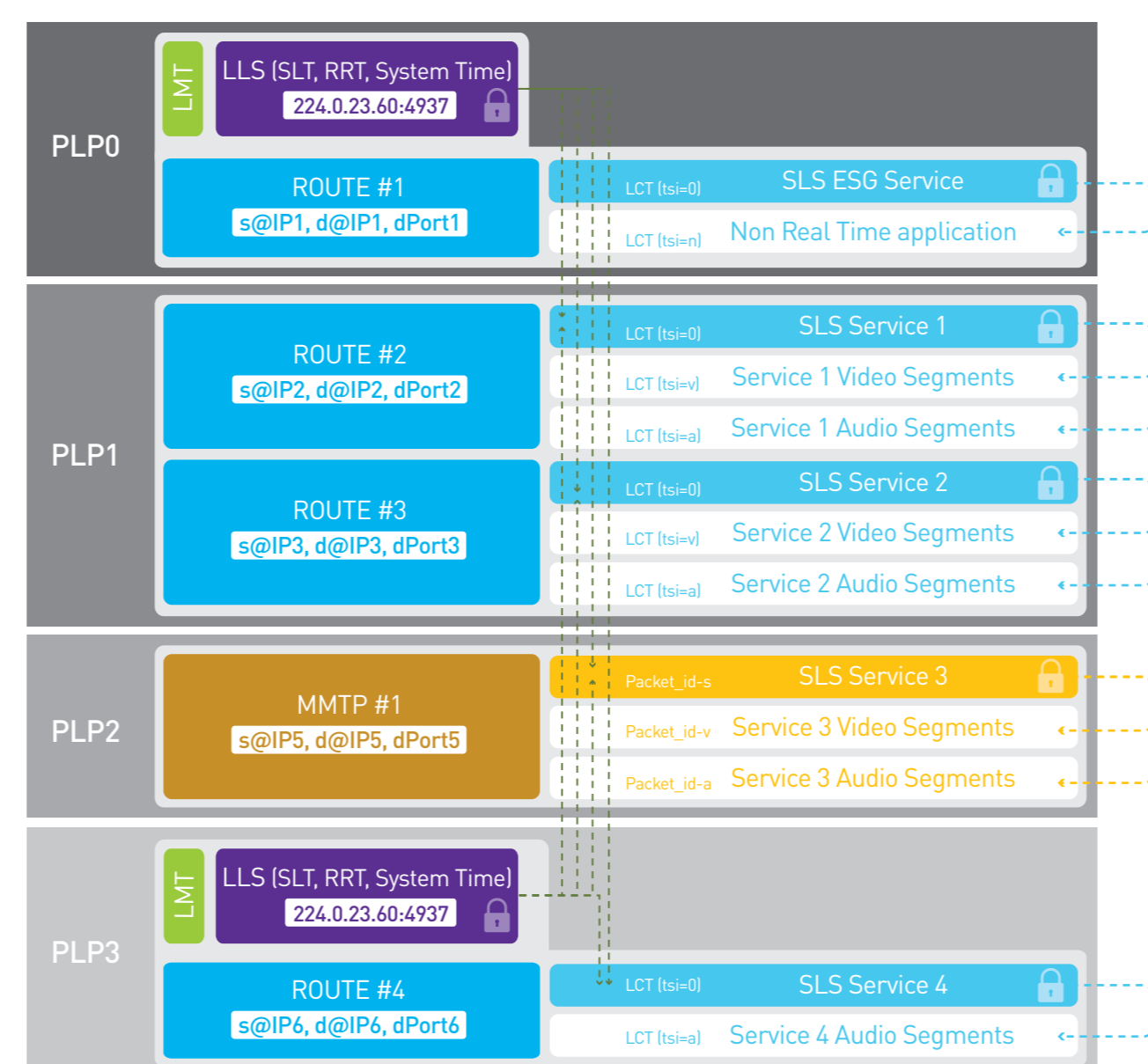
PLP allocation



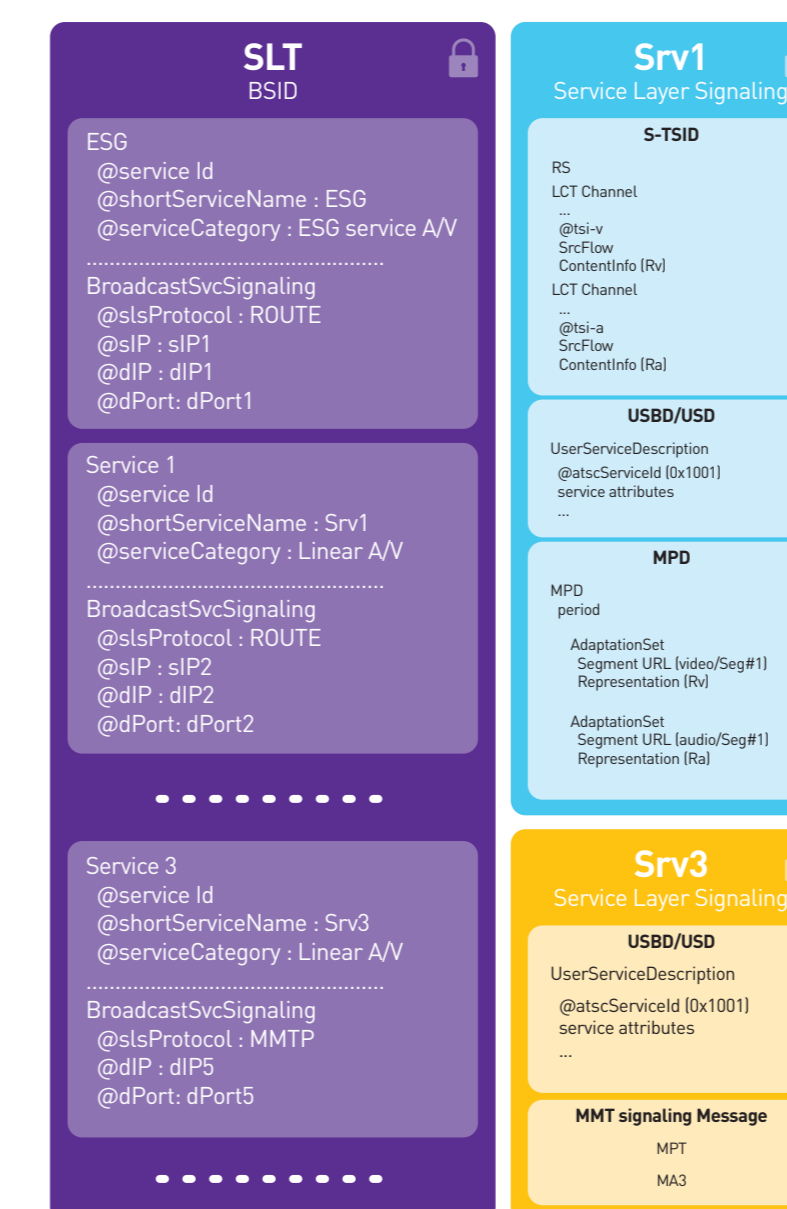
Architecture



Service Acquisition



Signaling



GLOSSARY

AEA	Advanced Emergency information	MPT	MMT Package Table
ALP	ATSC Link Layer Protocol	MPU	Media Processing Unit
BB	Base Band Frame	NRT	Non-Real Time
BSID	Broadcast Stream ID	NUC	Non-Uniform Constellation
DASH	Dynamic Adaptive Streaming over HTTP	PLP	Physical Layer Pipe
EFDT	Extended File Delivery Table	ROUTE	Real-Time Object Delivery over Unidirectional Transport
ISO BMFF	ISO Base Media File Format	RRT	Rating Region Table
LCT	Layered Coding Transport	S-TSID	Service-based Transport Session Instance Description
LDM	Layered Division Multiplexing	SLS	Service Layer Signaling
LMT	Link Mapping Table	SLT	Service List Table
LLS	Low Layer Signaling	STLTP	Studio to Transmitter Link Transport Protocol
MA3	MMT ATSC 3.0 Signaling Message	TDM	Time Division Multiplexing
MPD	Media Presentation Description	USBD/USD	User Service Bundle Description / User Service Description
MMT	MPEG Media Transport		
MMTP	MPEG Media Transport Protocol		

Protocol Stack

