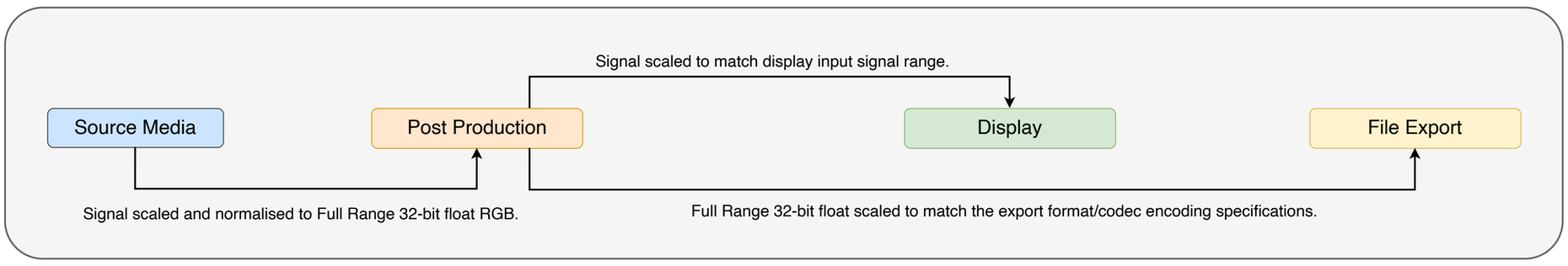
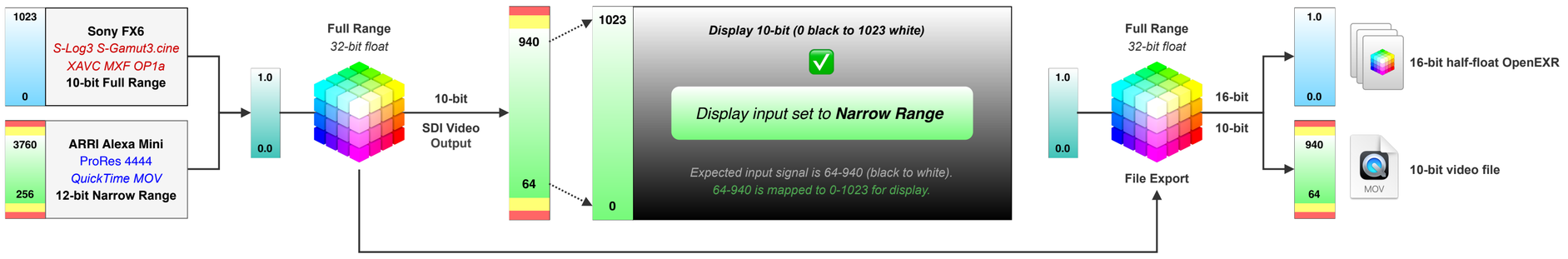
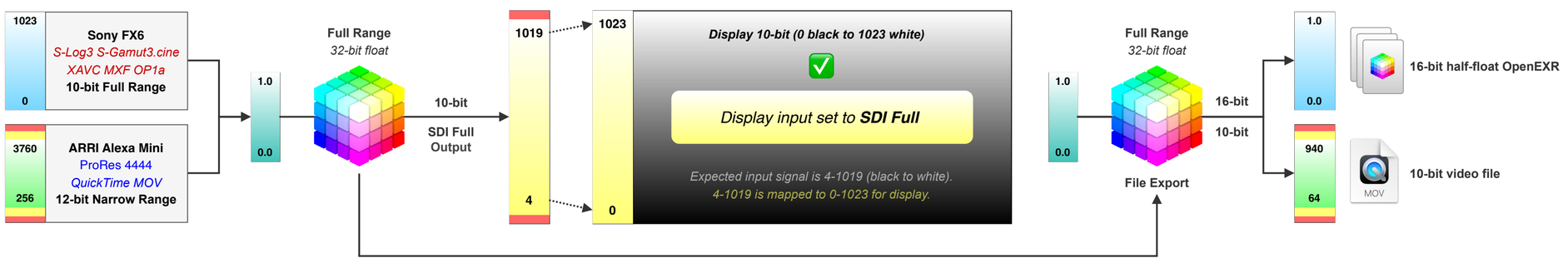
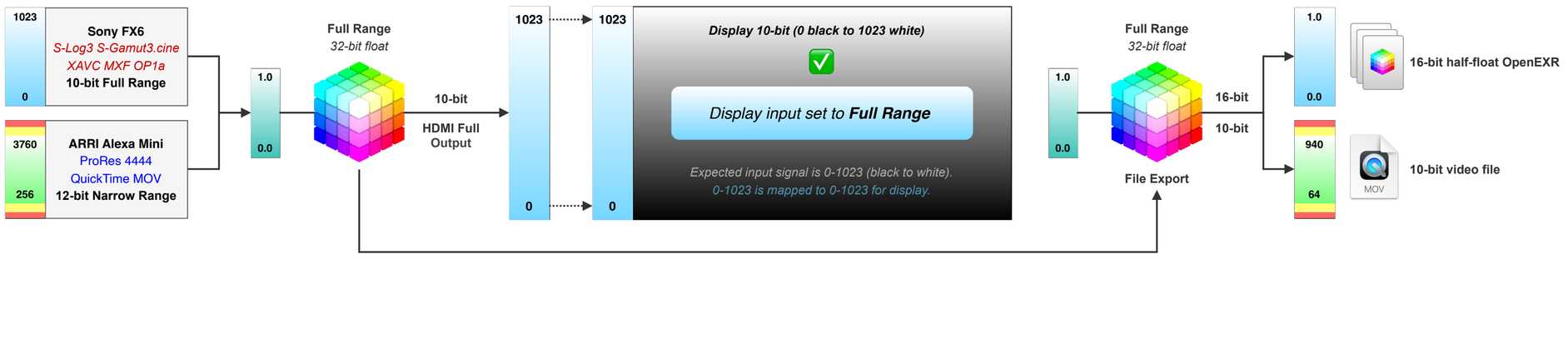
Created by Thomas Berglund, 2024-02-02

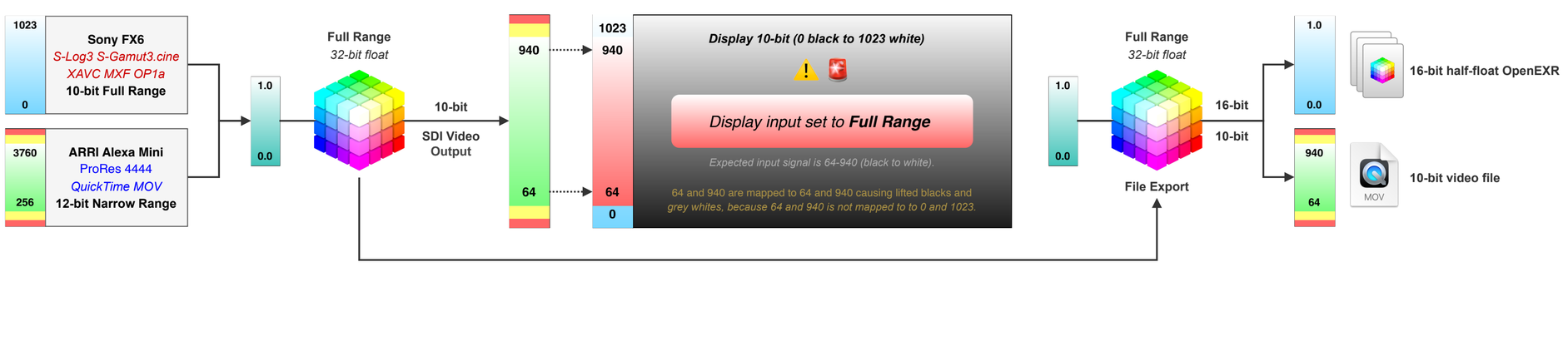
Digital Video Signal Levels in ***Post Production***

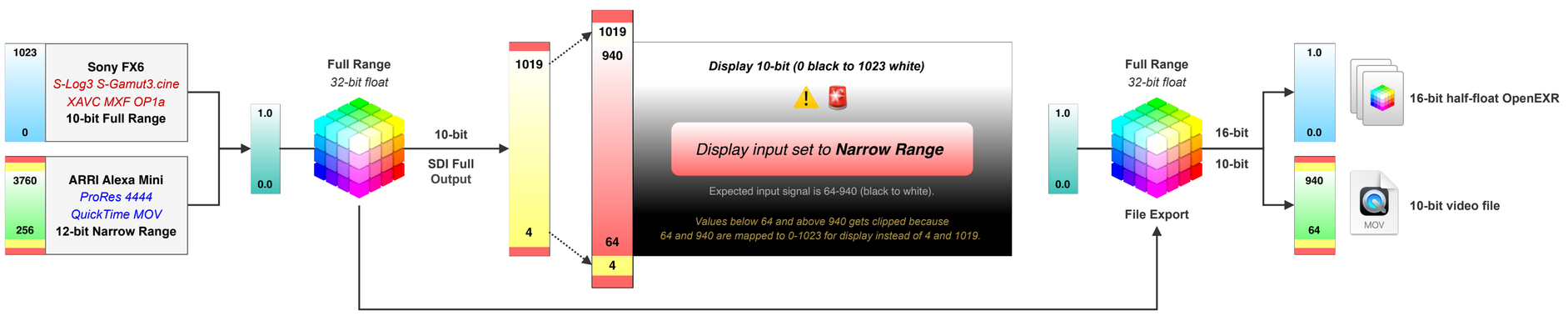


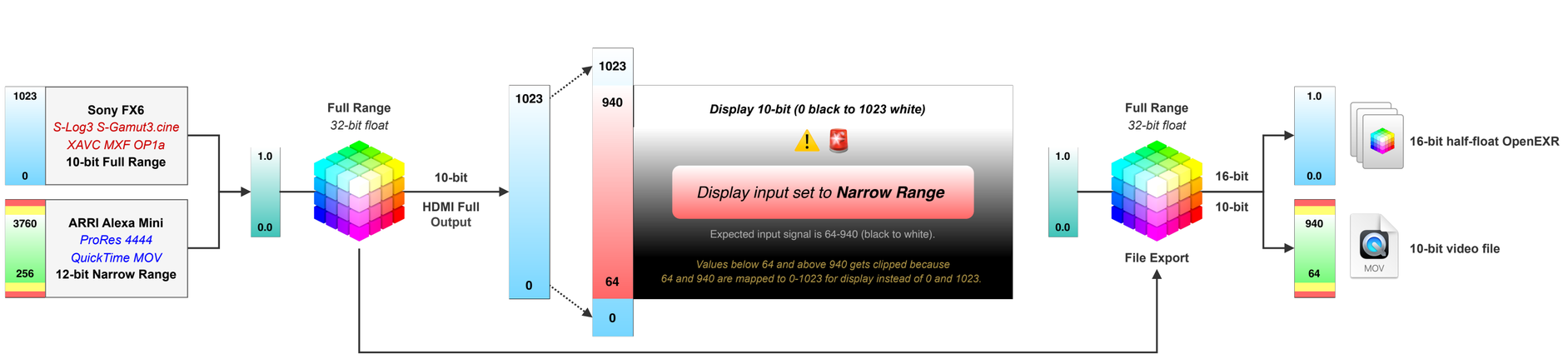












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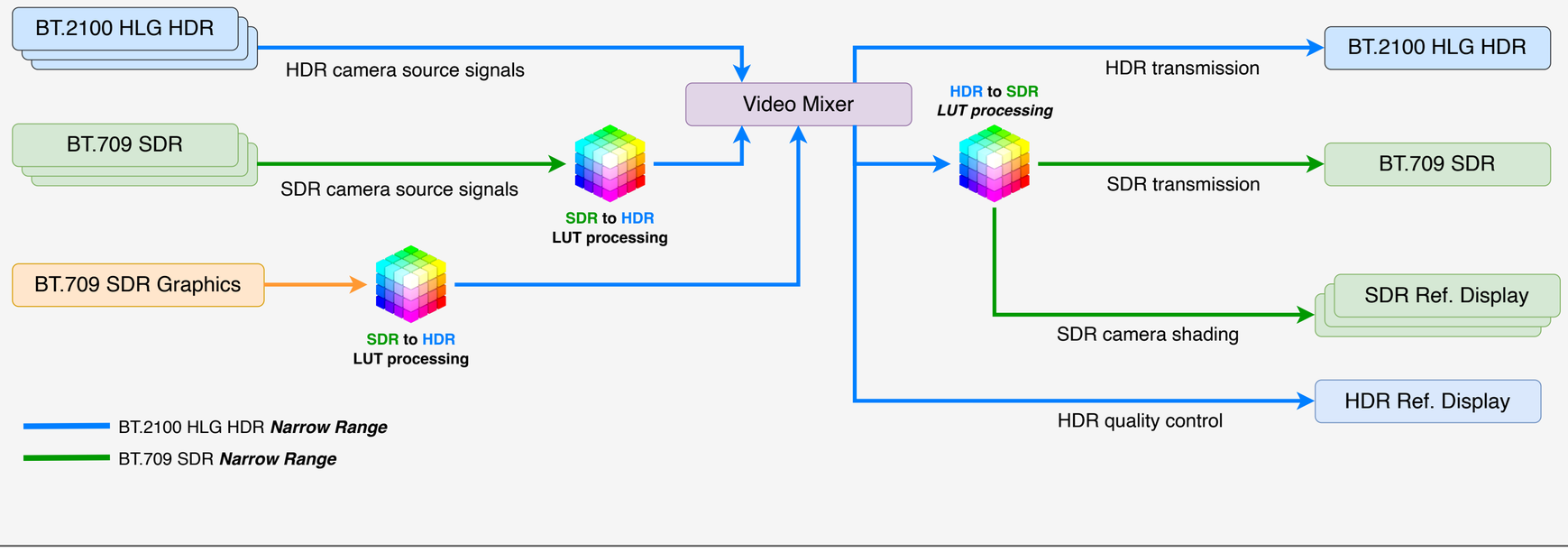
Digital Video Signal Levels in ***Live Production***

HDR production with camera shading in SDR — simplified version of Fig. 20 in ITU-R BT.2408



EBU R 103 **Video Signal Tolerance in Digital Television Systems**

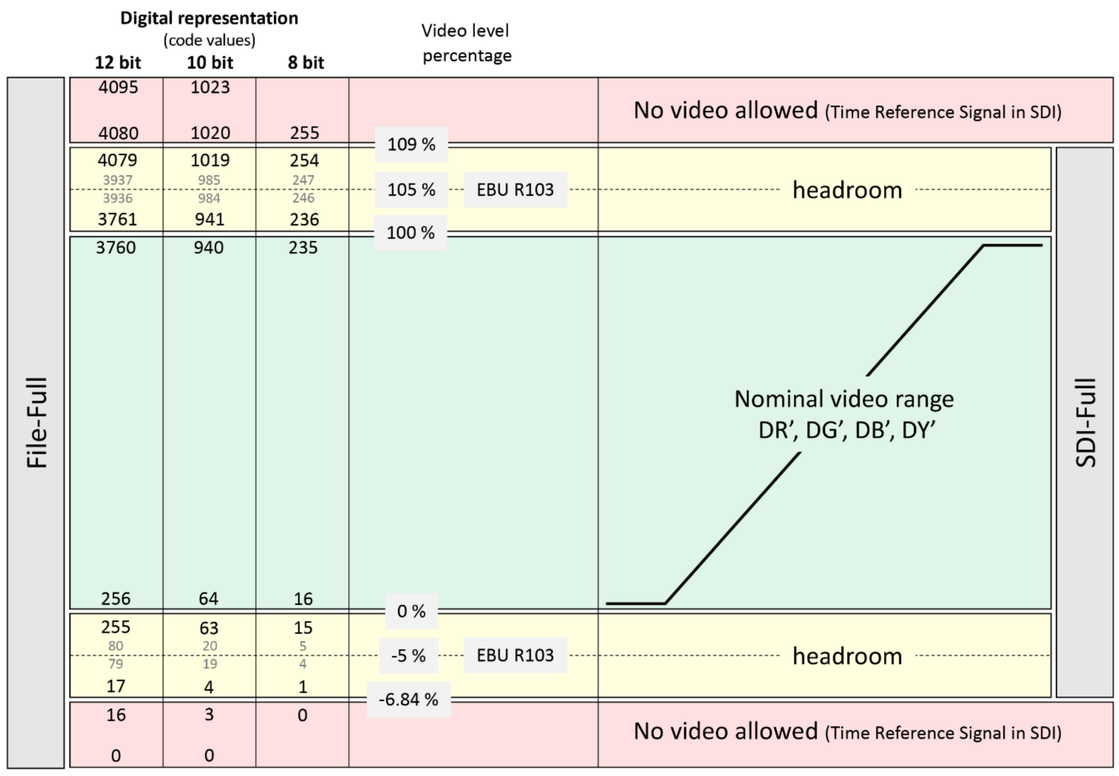
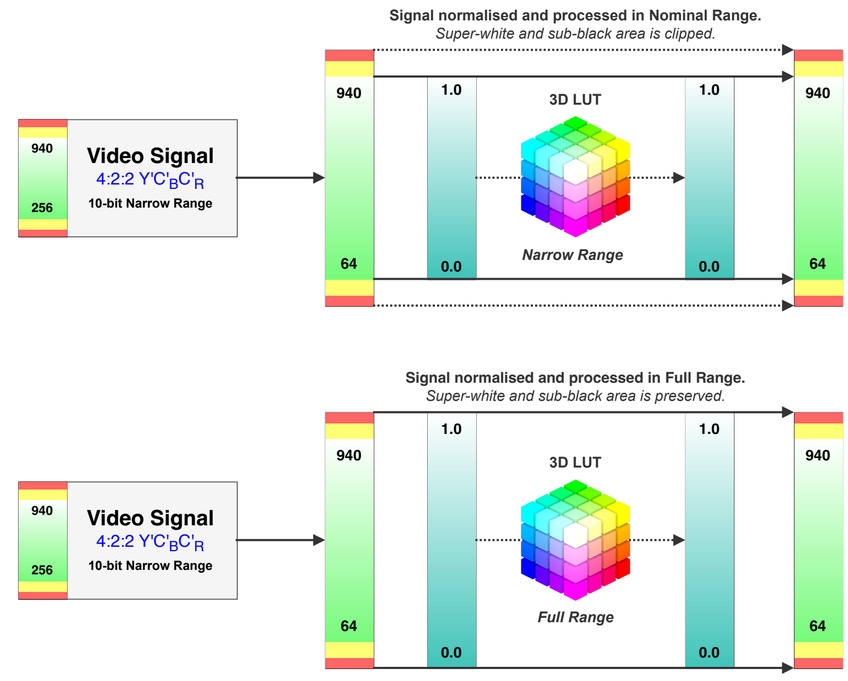


Figure 1: Typical signal levels for SDI

The most common two scenarios for 3D LUT signal processing.

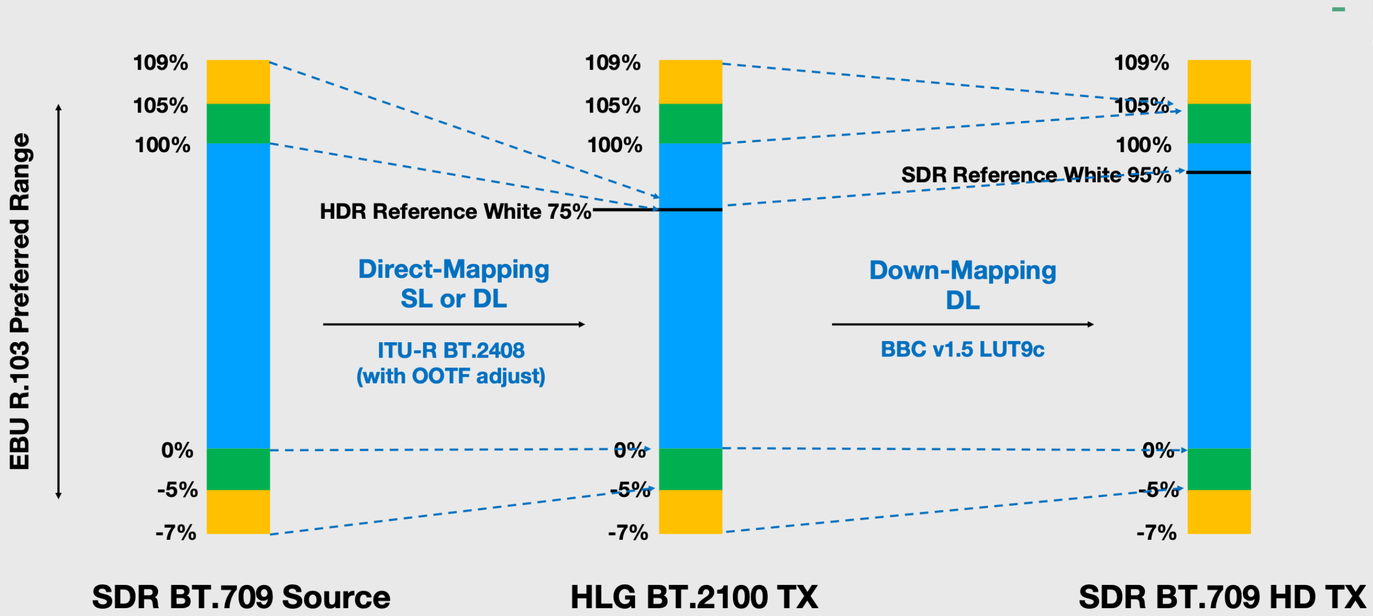
This is a simplified illustration. There are additional steps involved like $Y'C'_BC'_R$ to R'G'B' matrix conversion, which isn't included in this example.



BBC Research & Development

Illustration from EBU HDR Workshop 2022, presented by Andrew Cotton, Principal Technologist, BBC R&D

EBU R.103 allows SDR viewers to benefit from HDR production and reduce "round-trip" losses



- LUT9c down-mapping ensures R.103 "preferred" signal range
  - SDR "super-whites"
    - add detail in highlights
    - Reduce round-trip losses
      - Avoids need for up-mapping in SDR>HDR
      - HDR Ref White > 95% SDR
  - Sub-blacks
    - Increase colour gamut