OTT Monitoring

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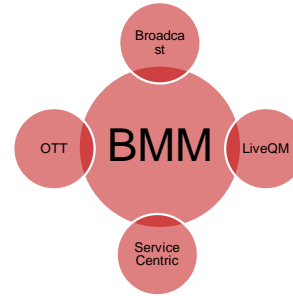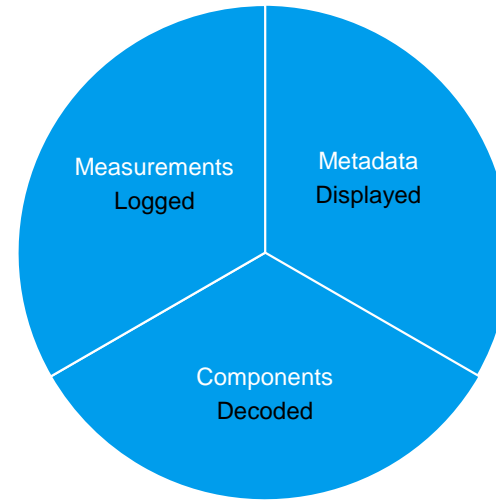
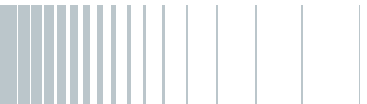# Broadcast Monitoring Overview

Main application areas

- Broadcast monitoring
- Quality monitoring & measurements
- Service Centric
- OTT monitoring

Broadcast Monitoring

- Visualization as classic video wall, including audio bars and meta information
- Multiple Tile Types: TV & Radio, Teletext, Logfiles, Multiple Clocks...
- Visual Monitoring still the easiest way to monitor broadcast services, as the impact of errors is clearly visible...automatic detection of content layer errors such as video freeze, video black, audio silence...
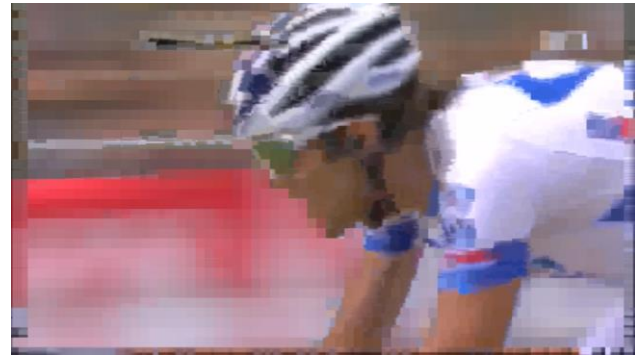- Reporting of errors via SNMP, WebUI and on Video Wall

LiveQM Video Quality Monitoring

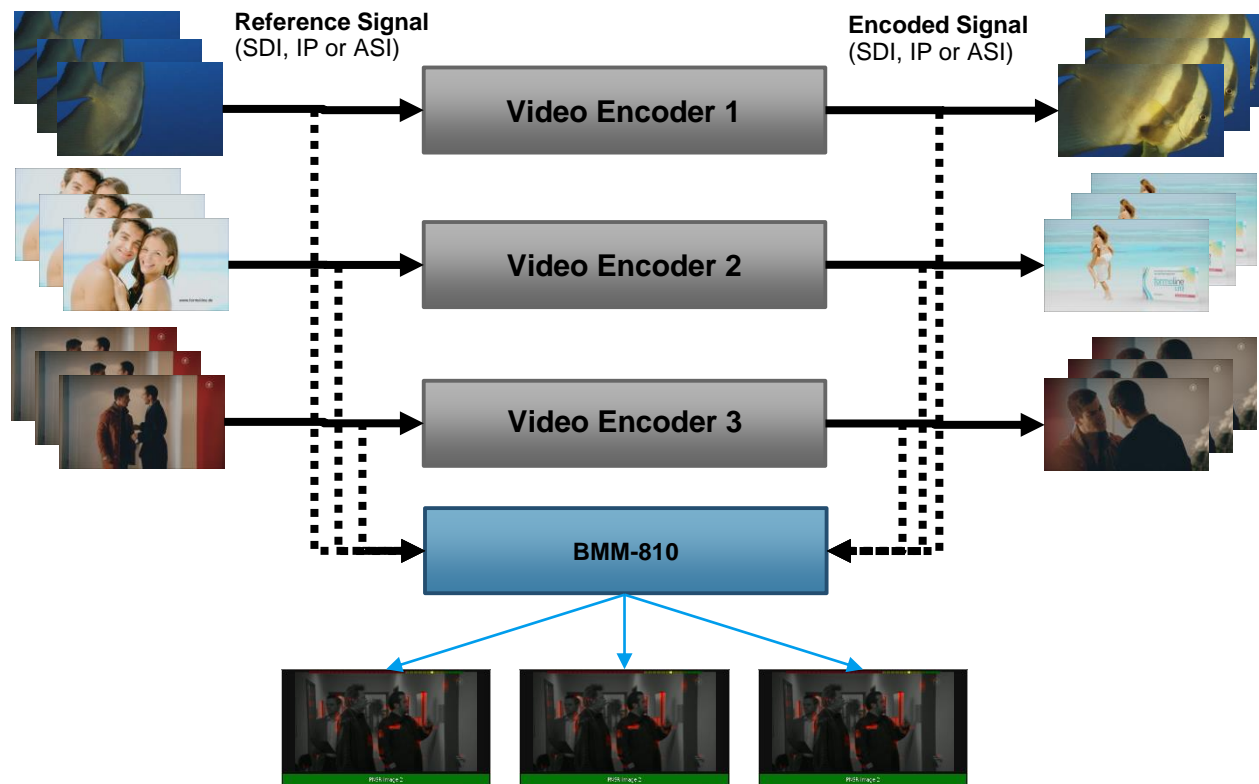▌ **Why Video Quality Monitoring is needed in Broadcast Networks ?**

- Detection of over-compression
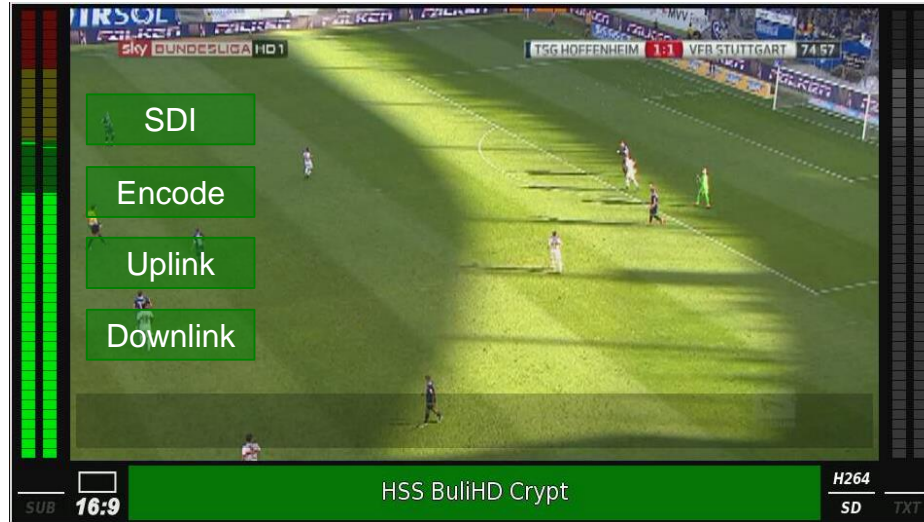- Detection of encoder failures
- Detection of Statmux failures

▌ **...but also:**

- Long-term and field measurements
- Comparison of video encoders

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LiveQM Video Quality Monitoring: Setup

Reference Signal
(SDI, IP or ASI)

Encoded Signal
(SDI, IP or ASI)

Video Encoder 1

Video Encoder 2

Video Encoder 3

BMM-810

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▮ **3 references, 3 individual results**

Service Centric Visualization

- Show every service only once
- Show status of other monitoring points as status icons
- **Neat visualization of all relevant information, reduces required screenspace or allows bigger tiles**
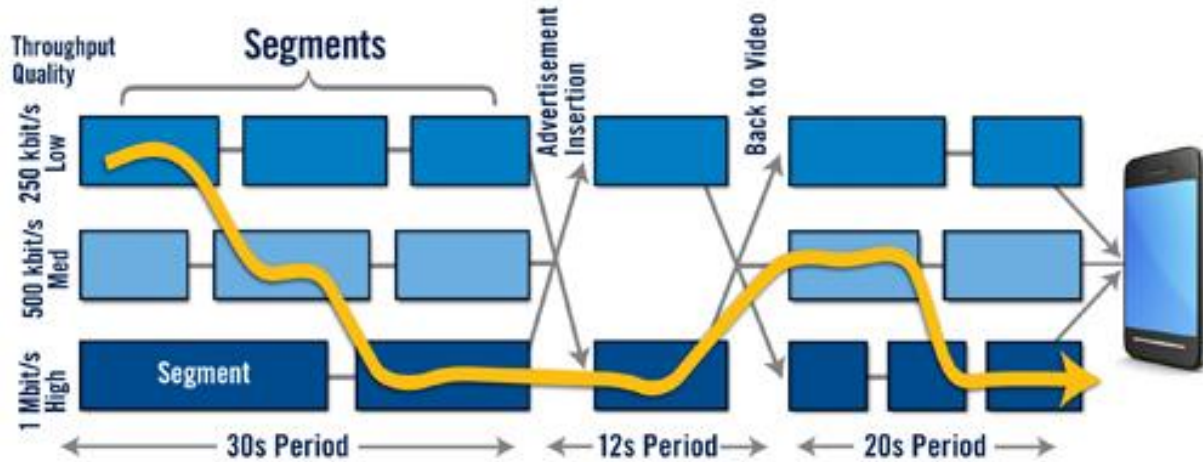
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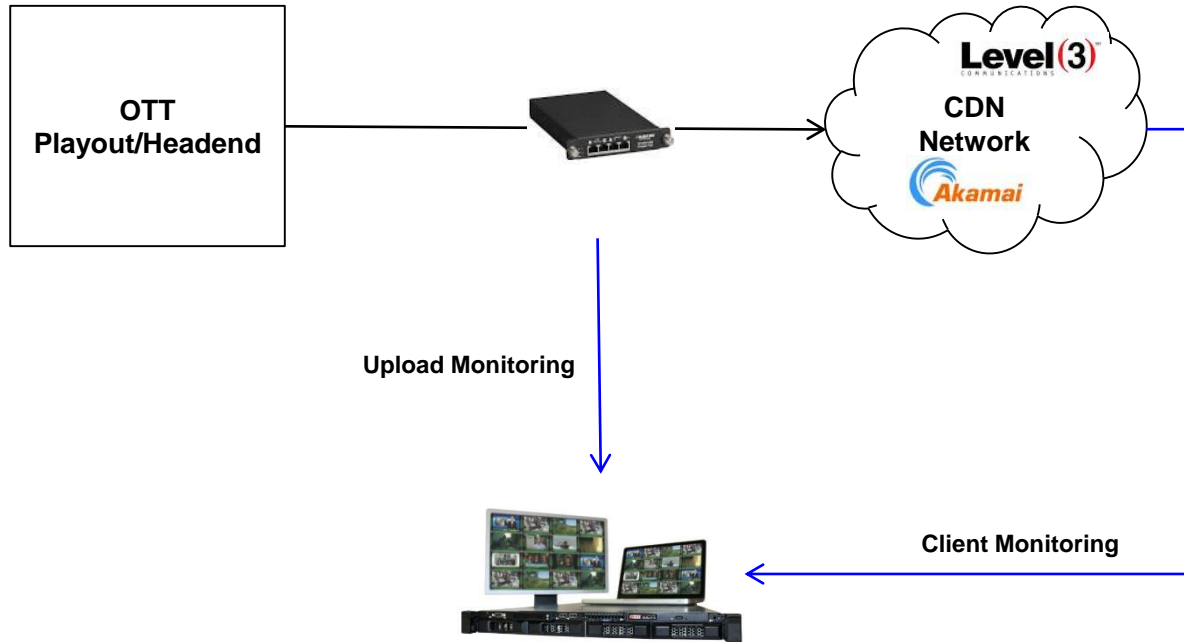
Over-the-top (OTT) Monitoring

Adaptive streaming

Over-the-top (OTT) Monitoring

Upload and Client Monitoring

Over-the-top Client Monitoring

Screen space-saving visualization combined with full monitoring depth

Download Ratio: Ratio of fragment duration and download time

Visual Monitoring of highest and lowest quality of a multiscreen service

Availability of all qualities of a multiscreen service

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Over-the-top Client Monitoring

Example: 36 services each with 8 qualities… nearly 200 different streams!
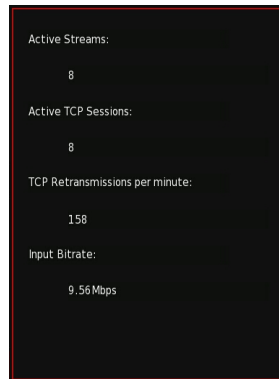

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Upload Network Monitoring

New measurements on TCP/IP level

- TCP Reconnection
- TCP Retransmission
- IP Bitrate
- Active TCP Connections
- Active OTT Sessions
- Upload time and ratio

Comparable to TS and RF measurements

All measurements… :

- …are available on a session level and in total
- …compared against user-defined thresholds for alarming

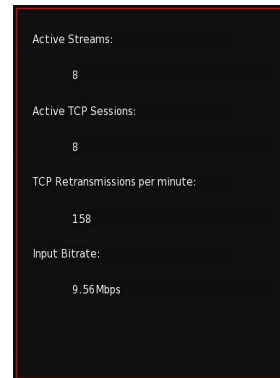ROHDE&SCHWARZ

Upload Network Monitoring

Better failure analysis

- Quickly identify cause of problems
- Allows to pinpoint where to search for errors:
  - Headend or. Playout
  - Upload Connection (ISP)
  - Receiving CDN

Detection of hidden network problems

- Reveals problems without any direct service impact
- Enables network optimization

→ Upload Network Monitoring increases service availability & simplifies network monitoring

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Summary OTT Monitoring

Benefits
- Control your quality
- Quickly identify failures
- Identify who causes the problem?
- Optimize your network
- Increase Service availability

BMM810
AV Monitoring Platform

PRISMON

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Thank you for your attention!

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