

# STREAMPROBE

# IPTV

## One single Consistent Monitoring Solution for Contribution / Encoding / Packaging

STREAMPROBE IS A FULL SOFTWARE SOLUTION FOR CONTENT QoS & QoE MONITORING THROUGHOUT THE ENTIRE VIDEO SERVICE PROCESSING CHAIN. HIGH DENSITY & SCALABLE, HUNDREDS OF SERVICES CAN BE MONITORED IN PARALLEL IN A ALL-IN-ONE OR DISTRIBUTED ARCHITECTURE.



### APPLICATIONS

- **24/7 monitoring** of the **content QoS & QoE**: received from **contribution**, prior & after **encoding** as well as from an **end user point of view**
- Generation of **Service Availability reports** for SLA commitments
- **Live TS Recording** for **legal obligation** and **conflict/litigation proof**
- **All services view at-a-glance**: Live Thumbnail Mosaic

### BENEFITS

- **High density**: hundreds of services monitored in **real-time & in parallel** in a single 1RU server; **10Gb** interfaces supported
- **Scalable**: from an all-in-one system to a fully distributed architecture
- **Software only**: Linux OS, VM for **virtualized** environments

### QoS MPEG-2 TS monitoring

- **MDI**: Delay Factor, Media Loss Rate, Delta (min, max, average), Drift & Period Drift
- **FEC support** (packets recovered/lost), IP jitter
- **ETS TR 101 290 Priority 1, 2, 3**
- **PSI/SI** repetition rates, scrambling
- **Bitrates**: TS, service & service components, PSI/SI

### QoE monitoring

- **Video** monitoring: freeze, black screen, missing intra detection
- **Video PID code** information: type, pixel format, profile, level, GOP structure and size, image count and weight, width, height, aspect ratio, frame rate and type, VB delay
- **Audio** monitoring: levels, silence detection
- **Audio PID code** information: type, channel number and layout, sample rate and format
- **Subtitles** DVB and Teletext: decoding and display
- **Formats**: MPEG-1 audio, MPEG-2 audio/video, H264 SD & HD, 4K, HEVC

### Video Processing

#### Live Thumbnail Mosaic:

- All services view at-a-glance on a thumbnail wall, real-time update
- Thumbnail display options: audio levels, subtitles, penalty box (ongoing alarm status)

#### Live service(s) streaming over low bandwidth links (service compression)

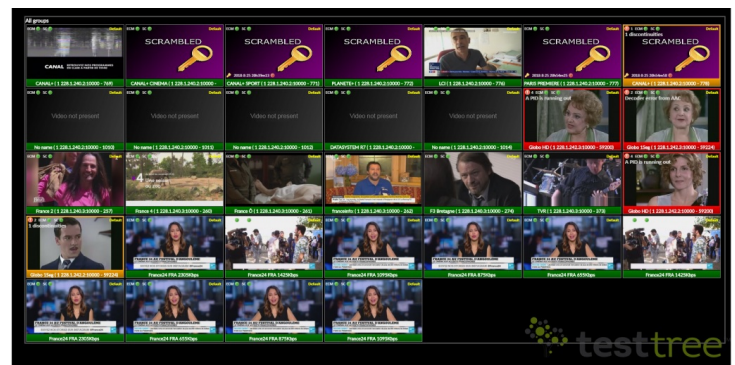
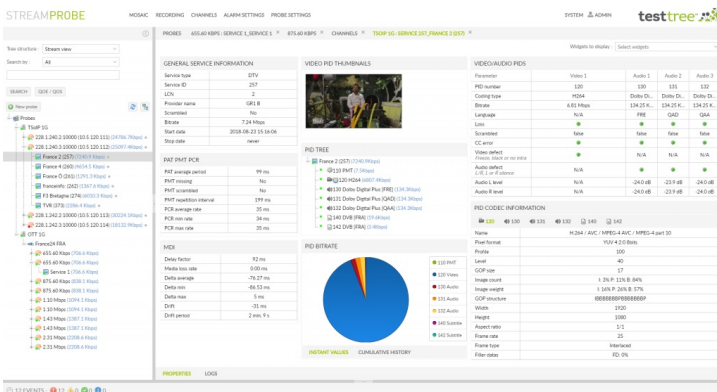
#### TS recording: on error or manually scheduled

### System Integration

- Configurable alarming thresholds: **general and daily alarm profiles**
- NMS integration: **SNMPv2** support for alarm traps
- Monitoring information available via an **open API** (HTTP/JSON API)

### CA Processing

- EMM/ECM: presence, repetition, bitrates
- **FTA <-> scrambled**: **transition** timing detailed display



### ORDERING CODES

StreamProbe IPTV

IPTV Monitoring Probe

