MPEG Monitor

Real time QoE Monitoring of Several MPEG-2 and MPEG-4/AVC programs

Product information

Product

- ☑ Software
- ☐ Hardware [1]

Video quality metric type

- ☐ Full reference [2]
- ☑ No reference [2]
- ☑ Parametric [2]
- ☐ Hybrid

Input types

- ☐ File [2]
- ☑ IP streaming
- ☐ Capture card, device [2]

Input formats

- ☑ MPEG-2
- ☑ H.264
- ☐ Uncompressed
- ☐ Other formats

Applications

- ☑ Video encoders benchmarking
- ☑ Video encoders comparison
- ☐ File-based encoding monitoring
- ☑ Live programs monitoring [2]
- ☑ Optimal bitrate determination
- ☑ Video processing optimization

[1] Hardware (PC) may be supplied as an option

[2] Please see our other products, like Video Quality Monitor and Video Quality Analyzer
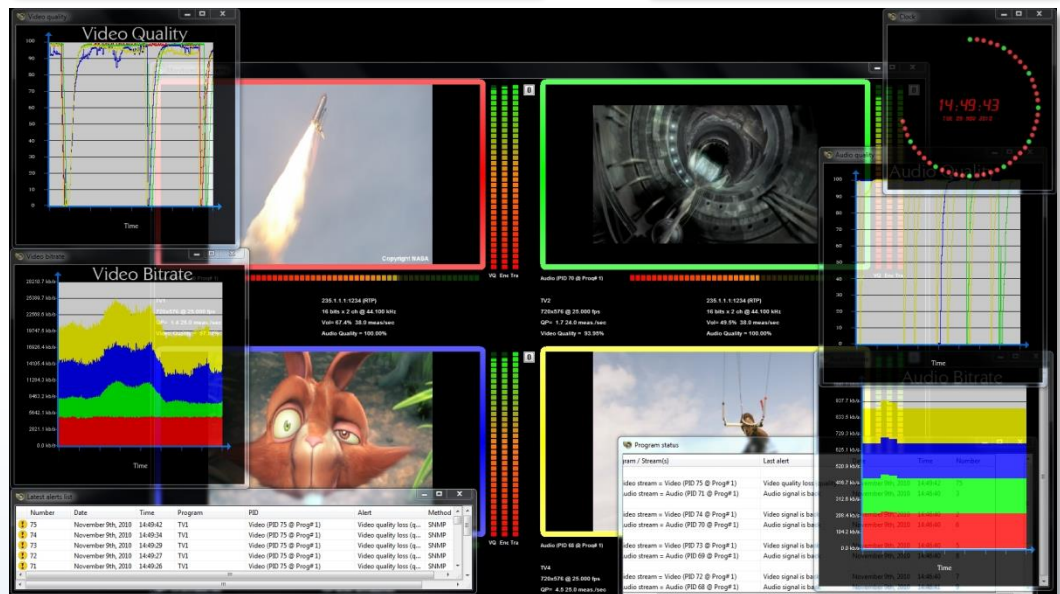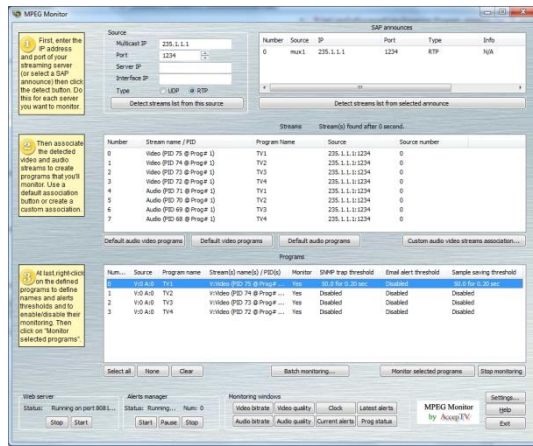
With the increasing number of audio video services, the need for automatic monitoring tools becomes more and more complex and critical.

However, perceived quality (QoE) measurement often requires important computing power which make impossible to monitor several programs simultaneously on a single machine.

So with classical tools, you need one monitoring machine for each program you want to monitor.

This constraint makes it practically impossible to monitor TV head ends processing an important number of channels. Indeed, to monitor 100 channels, you would need to install 100 machines so the cost and the required room space would be too high.

Luckily, MPEG Monitor is here.

MPEG Monitor is the state-of-the-art software solution to monitor several MPEG-2 and MPEG-4/AVC (H.264) programs on the same machine.

Instead of intensively exploring the pixel values, MPEG Monitor catches information from the decoder and injects it in a Human Vision model which outputs quality scores. These scores are then used to trigger alerts (SNMP, email). All measures are saved so that results can be reviewed later.

MPEG Monitor enables to:

• Monitor video quality and bitrate in real time

• Monitor audio quality and bitrate in real time

• Trigger alarms (SNMP traps, emails) when **audio or video signal is lost**, when **audio or video signal is back**, when **audio or video quality is lower than a user-defined threshold**, when **blockiness**, **black frames**, **jerkiness** or **silence** goes beyond user-defined thresholds

• Save audio video samples when problems occur

• Compute quality statistics over a user-defined period of time

Take the lead in the race for quality

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AccepTV
Perceived Video Quality Metrics

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Principle

Web browser

Streaming server 1

MPTS 2 (RTP)

MPTS 1 (UDP)

SPTS 3 (RTP)

Video quality scores

Audio quality scores

Alerts (SNMP, email)

MPEG Monitor

Integrated web server

Streaming server 2

SPTS 4 (RTP)

MPTS 5 (UDP)

Built-in database

This is an example with only 2 streaming servers sending MPTS (Multi Program Transport Stream) and SPTS (Single Program Transport Stream) in RTP and UDP, but MPEG Monitor supports up to 64 source servers.

Perceived quality measurement and bitrate measurement

MPEG Monitor measures the perceived video quality and the perceived audio quality on a scale from 0 to 100. It also measures the instant video and audio bitrates (for any frame) and the mean video and audio bitrates.

Integrated web server and database

MPEG Monitor saves all measurement data in a built-in database. It also includes its own web server so that you can remotely:

• consult the results from the database
• see the quality and bitrate curves (and scores) of monitored programs, in real time
• display interactive quality and bitrate curves for any monitored program, between two user-chosen dates (granularity: 1 minute)
• download and play saved samples of detected problems

SNMP traps and emails

MPEG Monitor can send SNMP traps and email alerts when problems happen (low quality, blockiness, freezing, etc.)
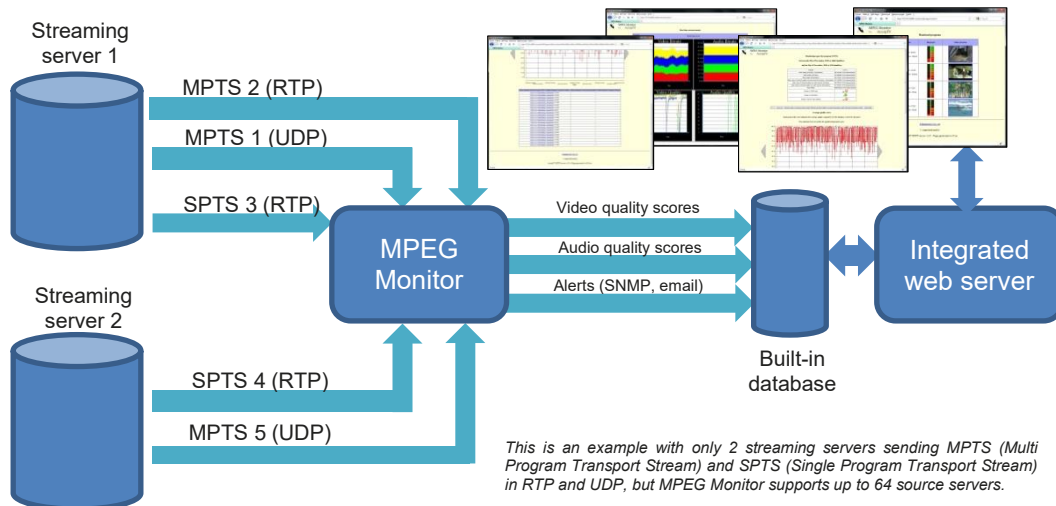
View programs in full screen

MPEG Monitor also enables to send a user-selected program or the most distorted program on a given audio video output card.

Ask for a free evaluation version now!

Features

Main function
Real time monitoring of several audio and/or video programs simultaneously
Visualization of video programs, video quality, audio levels and streams information

QoE
Parametric MPEG-2 and H.264 (MPEG-4/AVC) video quality measurement technologies
No reference audio quality measurement technologies
Distinction between encoding video quality and transmission video quality
Human vision modeling
Video signal absence/presence detection
Audio signal absence/presence detection

Results
MOS values, MOS curves
Bitrate values, bitrate curves
Alerts and samples

Alerts and samples
SNMP traps and/or email alert
• when audio or video signal is lost
• when audio or video signal is back
• when **audio quality** or **video quality** is too low (user-defined threshold)
• when **blockiness**, **black frames**, **jerkiness** or **silence** are too low (user-defined thresholds)
Saving of audio video samples when quality is lower than a user-defined threshold during a user-defined duration (saving from X seconds before the problem to Y seconds after the problem, X and Y being defined by the user)

Input
IP audio and/or video streaming in UDP, RTP, RTSP, HTTP and/or HLS (HTTP Live Streaming)
SPTS and/or MPTS
Unicast and/or multicast
From one or several servers (up to 64 servers)

Output
Support of DirectShow compatible rendering video and/or audio cards

Extra
Integrated HTTP server for distant results consultation and built-in database to store results
Automatic restart mode
Compatible with all image sizes (SD, 720p, 1080i, 1080p, custom)
Compatible with all display aspect ratios (4/3, 16/9, 1.85, 2.35, custom)
Compatible with all frame rates (25 fps, 30 fps, 23.976 fps, etc.)
Several monitoring windows: Mosaic of monitored programs, video quality, audio levels, audio and video quality curves, audio and video bitrates
Batch monitoring: monitoring up to 400 programs on a single machine (up to 64 programs at a time)

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