

## The Agama Verifier

Agama Verifier is a software based solution for automated test and validation of on-demand video content. It can be easily integrated in a workflow for handling video on demand (VoD) assets. It supports fully automated verification, replacing time consuming and error prone manual testing.

### Key Features

- MPEG-2 and MPEG-4 AVC Single Program Transport Stream off-line analysis
- Verify standards compliance on Transport Stream Layer (ISO 13818-1)
- Flexible, user definable templates verify content properties such as bitrates, video formats, subtitling and audio formats
- MPEG Audio L1,L2 and L3 support
- AC-3 Audio support
- DVB Subtitles support

### Applications

- VoD asset verification
- broadcast asset verification

## Analysis

Agama Verifier tests content for standards compliance, as well as testing it for user definable criterion such as bitrates, video formats, languages for audio and subtitles and other parameters. This enables an operator to find problematic content before it is ingested and can cause customer complaints.

The Agama Verifier detects errors on all layers: TS, PES and the video elementary stream layer.

The Verifier also measures important transport stream parameters such as PSI repeat rates, transport stream bitrates and PIDs used.

### User definable criterias

In addition to testing for syntax errors in the MPEG file, Agama Verifier can measure a number of properties of the file, such as bitrate, languages and type of elementary streams and match this against a template file. This template file is user configurable to match the type of video server and/or set-top box used. The result of a test is either that the file passed or that the file failed. An XML format

report is also generated, which can be presented and processed further.

The template file can be precisely tailored to match the VoD and set-top box used.

### Integration with workflow

Agama Verifier runs automatically and scans its source directory regularly for files to process. When a new file appears, it is tested and the result is compared with the template. If the file is deemed correct it will be copied with its test-report to a 'File Passed' directory. If the file is deemed incorrect it is copied to a 'File Failed' directory with its test report.

# Agama Verifier

## Key Specifications

- XML based report file
- user defined template controls validation process
- ISO 13818-1 Transport stream syntax check
- Number of TS packet syntax errors
- Number of PAT/PMT syntax errors
- Transport stream Video STD buffer analysis
- PAT/PMT properties, such as repeat rate
- PES syntax check
- Number of discontinuity bits set in stream
- Bitrate properties:
  - VBR: max/min/average
  - CBR: bitrate, bitrate accuracy
- Number of video, audio and subtitle tracks
- Language on video, audio and subtitle tracks

- ISO 13818-2 (MPEG-2 MP@ML, HP@ML) Video stream syntax check
- MPEG-2 GOP structure check
  - closed/open GOP
  - max/min/avg GOP length
- MPEG-2 Video properties:
  - resolution
  - frame rate
  - bitrate
  - interlaced/progressive/field coded
- ISO 1496-10 (MPEG-4 AVC) video stream syntax check (NAL check)
- MPEG-4 AVC Video properties
  - resolution
  - level, profile

## System Requirements

- Operating systems:
  - SuSE Linux 9.2 or 9.3
  - Red Hat Enterprise Linux 4
  - Fedora Core 4
- Intel x86 or compatible
- 512 MB RAM
- One or more network interfaces

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## About Agama

Agama Technologies provides broadband operators, telcos and other service providers with solutions and products enabling reliable and cost effective DTV services. The Agama DTV product line is a complete and distributed solution for real-time 24/7 DTV monitoring. The solution enables operators to minimize opex and churn by having full control of delivered quality and shorten time to fix.

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