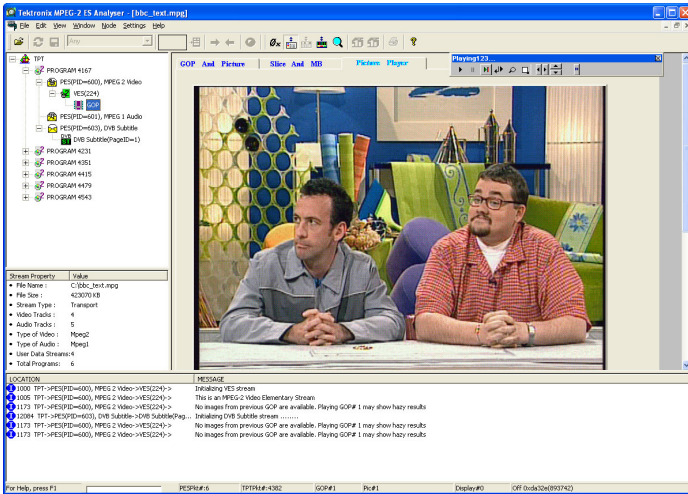


MTS400 Series MPEG Analysis Tools

Elementary Stream (ES) Analyzer Data Sheet



Features & Benefits

- Display and Analysis of GOP, Picture, Slices, and Macroblock Layer
- Picture Quality Analysis Including Quantizer Scale Distribution, Motion Vector Graphs, Macroblock, and Picture Size Plots
- DCT Analysis and Display
- Teletext Analysis (PES and VBI)
- Closed Caption Analysis to EIA 608, 708, 746
- DVB Subtitle Analysis and Display over Picture
- Analysis of MPEG-2 Audio to Provide Plots of Allocation Bits, Scalefactor Grouping, and SCFSI Against Sub-bands
- Audio Analysis of MPEG-2 Audio to Provide Plots of Allocation Bits, Scalefactor Grouping, and SCFSI Against Sub-bands
- Audio Analysis of Dolby Digital (AC-3), AAC, Adiff, and ADTS
- Regression Test Report Generator

Characteristics

Applications

The ES Analyzer provides the ability to view the moving picture from within a PES stream and carry out a whole range of sophisticated new tests on the lower layers of an elementary stream within a Transport Stream. In addition, it both displays and analyses a range of extended media formats, including ATSC Closed Captions, DVB Subtitles, and Teletext.

Feature Details

CODEC Views and Analysis

The sequence header can be viewed along with the extensions. The picture rate, chroma format and the video type (NTSC, PAL, etc.) appear in the status bar when the sequence headers are displayed. The stream can be run through with the option of analysis of the stream at picture level or at the macroblock level. When analyzing the group of pictures (GOP), it is possible to randomly access any picture from within the group, view the picture type, spectrum, and display picture size plots. The user can zoom in on the picture to see details at the slice or macroblock levels or view the encoded picture. Picture player can be operated until degradation in quality is seen, the picture paused, and the details reviewed down to the macroblock level. An easy mechanism is provided to switch between the picture display and the data analysis windows.

Macroblocks can be selected, and detailed coding investigated. The picture analysis can be performed with special displays of quantizer scale distribution, slice size distribution, macroblock-size spectrum, and motion vector plots.

Quantizer matrices can be downloaded for any picture, at most four matrices, namely intra-quantizer, non-intra-quantizer, chroma intra-quantizer, and chroma non-intra-quantizer matrix.

The picture coding extension is always displayed, while the other picture extensions are displayed on tabbed folders; these are copyright extension, picture display extension (PDE), picture spatial scalable extension (PSSE), and picture temporal scalable extension (PTSE). The B and P frame motion vector displays allow you to select Macroblock Intra, pattern motion backward and forward together with macroblock quantization, quantizer scale DCT type, and motion vector format.

Comprehensive error logging is provided during stream analysis, and selectable error filters are available. There is also an automated "regression" test mode that can save data from selected fields to report files for viewing later.

The audio analysis capability includes navigation to any audio frame and viewing its details, header, and frame data plots. Audio descriptors are interpreted and displayed in higher level streams and validated against the stream.

Extended Media Views and Analysis

Two primary forms of ATSC Closed Caption analysis are offered, CC-EIA608 and CC-EIA708. CC-EIA746 support is also supported in the EIA608 mode. In addition to displaying the captions for each frame superimposed on the video are Caption Statistics. These include Packet and Block information, Active Window plus Window Definition and Style parameters. These statistics may also be saved to a file.

DVB Subtitle data for the current display is provided, including Page and Region composition, Color Lookup Tables (CLUT), and Object data. An Object view displays a decoded bitmap of a selected object. A Page view renders the regions listed in the Page Composition on a blank screen.

Teletext data incorporated into DVB streams may also be displayed and analyzed. The Color Map Table, Decoded Display, and Decoding Parameters are displayed, which provide details of the teletext encoding data. Enhanced teletext support (VBI) is available in conformance with ETSI EN 301-775.

The supported extensions include:

- VPS (Video Program System)
- WSS (Wide Screen Signaling)
- Monochrome Data

Supported CODECs

- MPEG-2 Video
- MPEG-2 Audio
- MPEG-2 AAC Audio
- AC-3 Audio

Standalone Software System Requirements (MTS4SA)

- PC with Genuine Intel Pentium class 1.2 GHz processor
- Intel or 100% compatible motherboard chipset
- Windows 2000 or Windows XP Operating System
- Internet Explorer 5.0 or above
- 256 MB of RAM
- 50 MB of available hard disk space for the application and documentation
- SVGA (800 × 600) resolution video adapter and monitor (XVGA (1024 × 768) or higher resolution recommended)
- CD-ROM or DVD drive
- Keyboard and Microsoft Mouse or compatible pointing device

Ordering Information

Elementary Stream (ES) Analyzer

This application is available on MTS400 Series analyzer instruments, as MTS4SA standalone software, and on MTX/RTX Series generator instruments.

Additional Information

Please contact your local Service Manager for information regarding our products and services, or contact us at: www.tektronix.com/serviceandsupport/contactus



Tektronix is registered to ISO 9001 and ISO 14001 by SRI Quality System Registrar.



Product(s) complies with IEEE Standard 488.1-1987, RS-232-C, and with Tektronix Standard Codes and Formats.

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