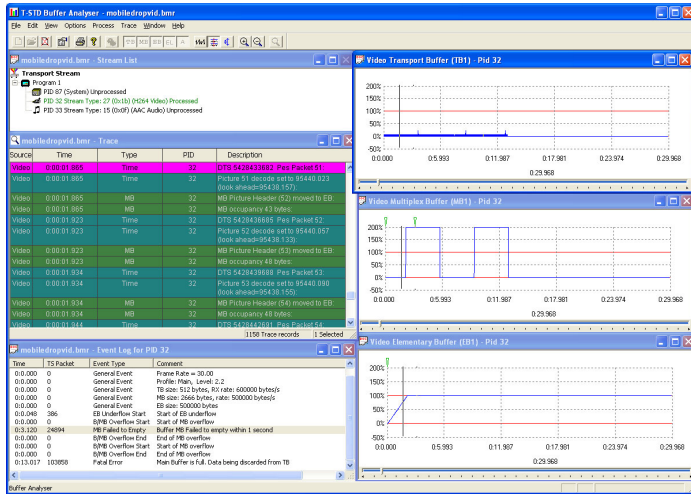


MTS400 Series MPEG Analysis Tools

Buffer Analyzer Data Sheet



Features & Benefits

- T-STD Buffer Analysis of Selected Elementary Streams within a Transport Stream File
- Graphical Displays of TB, MB, and EB Occupancies
- Supports a Wide Range of Audio and Video CODECs Types, Including AVC/H.264 and MPEG-4 AAC
- Message Log Reporting of Standards Compliance Violations
- Trace View Provides Details of the Buffer Movements for In-depth Analysis of the Results
- Synchronize Selected Log Entry with Trace and Buffer Occupancy Graphs
- Store Analysis Results in .bmr Files to Save Having to Reanalyze the Same Stream File
- Analyze ISDB Partial Reception streams

Characteristics

Applications

When developing professional and consumer equipment, particularly encoders and set-top boxes, the characteristics of the test streams being either generated or used as stimulus need to be ascertained. Of critical importance amongst these characteristics is adherence to the buffer model. That is, when the stream is processed by a receiver, will any of the internal buffers be caused to either under- or overflow. Consequences of these conditions will be freeze frames and receiver resets.

There are two types of buffer model; the one to use by the receiver is signaled within the Elementary Stream itself. The T-STD method is based upon the DTS values within the PES header and can be used for any contained CODEC type. Additionally, certain video CODECs such as MPEG-2 and H.264/AVC may contain buffer parameters within the ES itself. The Buffer Analyzer verifies conformance of a stream to the T-STD model. Verification of the H.264/AVC HRD method is covered by the MTS4EA product.

Feature Details

The Buffer Analyzer accepts any recorded Transport Stream as an input source. The TS is then demultiplexed into its component PES, grouped by Program. The user can select one or more PES to analyze for conformance to the T-STD model according to the buffer parameters for the CODEC type in question. General information such as profile and level together with any buffer errors are recorded in a log.

The user may manually set buffer sizes and other parameters prior to analysis, rather than use those specified by the standard or signaled within the stream.

Buffer Graphs

The occupancy level for each buffer within the model (3 for video, 2 for audio, and 2 for PSI) is plotted on a graph for each PES being analyzed. Graphs may be zoomed for ease of use. A Synchronization feature allows for comparisons at a particular point in time between each of the graphs and individual log entries.

Trace View

Version 8.0 enhancements have integrated the previously separate Tracer utility into the Buffer Analyzer application. The Trace view provides details of the buffer movements for in-depth analysis of the results. Trace entries are included in the Synchronization feature for ease of diagnosis.

Buffer Model Results (BMR files)

The analysis results will be stored in a .bmr file to save having to reanalyze the same file. Results files may be opened directly in the Buffer Analyzer, whereby logs, graphs, and Trace contents (max 7000 entries) are repopulated. They are far smaller than the original TS files and thus useful to add as e-mail attachments.

Supported CODECs

- MPEG-2 Video
- H.264/AVC (MPEG-4 part 10)
- MPEG-2 Audio
- MPEG-2 AAC Audio
- MPEG-4 AAC Audio, including High Efficiency and 5.1 channels
- AC-3 Audio
- PSI (ISO/IEC 13818 parts 1)

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

Buffer Analyzer

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



Product(s) are manufactured in ISO registered facilities.



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

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