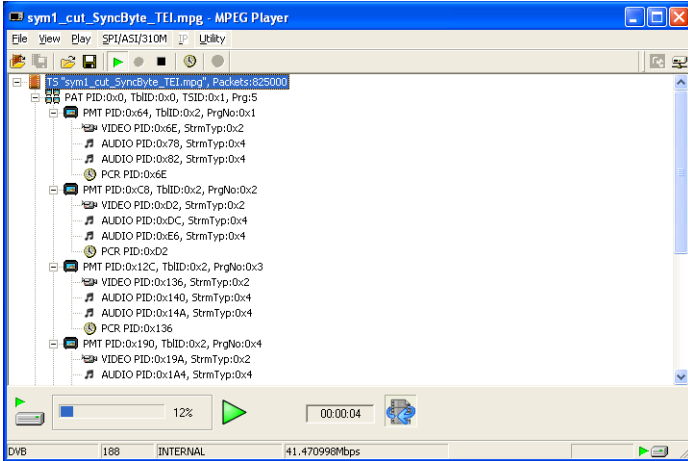


MTS400 Series MPEG Analysis Tools

Playout (Transport Stream Generation) and Recording Data Sheet



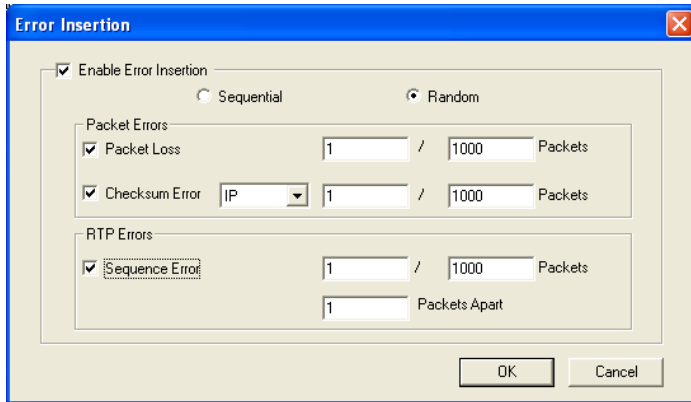
Features & Benefits

- Continuous Playout of Looped Streams is Possible at up to Maximum ASI Rate of 214 Mb/s
- Real-time Updating of Time Stamps and Time Tables for Error-free Looping
- PCR Jitter Insertion to Help You Fully Stress Your Product or System Design
- Simultaneous Playout and Recording (Duplex operation) over ASI, SMPTE310M, and DVB Parallel Interfaces
- Playout of TS over IP interface with Parametric Capabilities and Session Replication, Including Support for IPv6 and Time-stamped Transport Stream (TTS) Format

Characteristics

Applications

- IRD/STB Design and Manufacturing Test
- Evaluation of Professional MPEG Equipment
- Performance Verification of MPEG Systems
- Scheduling of Stream Playout and Recording for Broadcast and Production Line Applications



Feature Details

TS Playback

Continuous playout of looped streams is possible at up to maximum ASI rate of 214 Mb/s with automatic updating of time stamps. One-shot play, or selected file segment looping is possible. Playout rate can be automatic from file PCRs or manually set. Simultaneous playout and recording (duplex operation) for end-to-end system test is supported as standard with a maximum aggregate bit rate of 214 Mb/s (ASI/SMPTE310M and DVB Parallel only).

IP Playback

New IP Playback functionality provides stimulus with parametric capabilities and multisession replication to characterize behavior of network or device under test. This capability enables equipment manufacturers developing hardware or software solutions for video distribution over IP and IPTV to ensure quality and performance of products, resulting in reduced development costs and accelerated rollout of next-generation IP broadcast services. Improved quality of new video over IP and IPTV products also enables equipment providers to differentiate offerings from their competitors.

- Support for Parametric playout
 - Error Insertion Capability (Packet Drops, Checksum Errors, Sequence Errors, and Jitter). This may be inserted in sequence or randomly
 - Burst mode (both timing and packet number based)
 - Manual error generation capabilities
- Advanced Mode with Protocol header customization capabilities for source and destination ports and addresses, allowing configuration of MAC address, transport checksum, network checksum, and user editing of any packet header field parameters
- Session replication to simultaneously encapsulate and play a TS over many IP sessions. Multiple IP/UDP/RTP header fields may be incremented within each session
- Continuous looping with timing information and continuity updates to ensure seamless looping at the TS layer (see Continuous Looping section for more)
- Single-session playout up to 214 Mb/s and multisession playout up to 300 Mb/s (dependent upon TS bit rate)
- Fixed ES mode allows for manually specified playout bit rate, whilst maintaining the original duration of the stream
- Support for VLAN groups including editing of header fields
- Investment is protected through inclusion of support for IPv6 and TTS standards

Continuous Looping

The Player application offers a “Continuous Time Stamp” option. This provides real-time modification of the timing information contained in the source stream during looped playback. This process removes timing discontinuities which would otherwise occur at the loop point. Make Seamless application can be used to ensure continuous looping at the ES layer.

The following values are modified:

- Continuity Count
- PCR, PTS, DTS
- TTS (IP only)
- Time Offset Table (TOT - DVB only)
- Time and Date Table (TDT - DVB only)
- System Time Table (STT - ATSC only)
- Normal Play Time (NPT - MHP)
- Reed Solomon (ISDB-T only)

This feature is configurable from the stream player user interface and will operate in real time at the maximum playout rate.

Recording*1

Time-stamped transport stream recording can be made with packet arrival-time information stored for offline PCR timing analysis. The maximum record length is limited only by available disk space. It is not necessary to preallocate a file before recording.

Triggered Recording*1

It is possible to make either an immediate or triggered recording, with the user-definable pretrigger buffer being used to capture stream before, during, or after the trigger point.

Complete Transport Streams are recorded, with recorded file parameters being displayed upon completion. These include file size, bit rate, number of packets, trigger conditions, trigger position, and time.

*1 Recording in this application is not available for Transport Streams over IP. See Transport Stream Compliance Analyzer for details of IP capture.

Ordering Information

Playout (Transport Stream Generation) and Recording

This application is available as standard on MTS400 Series analyzer instruments and on MTX/RTX Series generator instruments. It is not available as MTS4SA standalone software.

Additional Information

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



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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