

# Digital Program Insertion Auditor™

The Digital Program Insertion Auditor is Pixelmetrix's analysis application that boasts a range of logging and reporting capabilities which allow operators to monitor and audit the accuracy of digital program insertion (DPI).

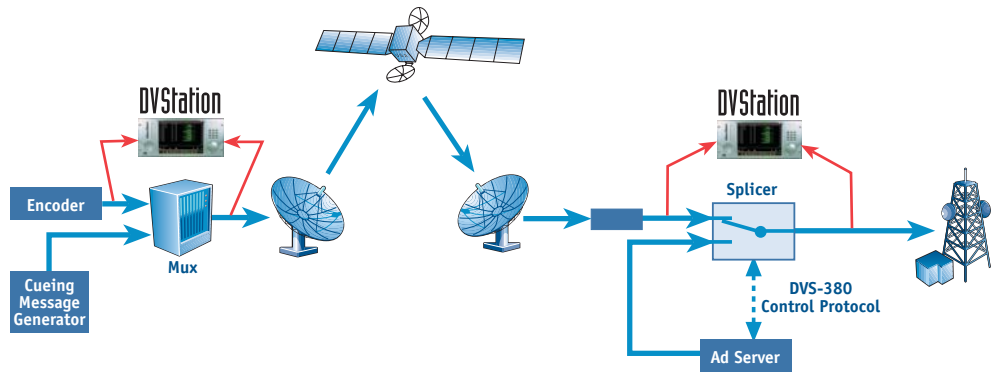
The DPI Auditor is built based on the new ANSI/SCTE 35 2001 standard (formerly known as DVS-253 and also known as ITU-T J.181). Developed from the team's close monitoring of the evolution of program insertion technology and corresponding changing needs, DPI Auditor is instrumental in the monitoring and verification of DPI.

## KEY APPLICATIONS

- Instill confidence by providing visibility of ads that actually ran
- Maximize air-time sales opportunities
- Smooth local commercial insertion
- Assist in settling disputes by identifying erroneous or improper ad insertions
- Billing verification through reports generated based on user specified parameters

## KEY FEATURES

- Multiple display formats
- Incoming splice message validation
- Online log of all messages
- Capture incoming and outgoing transport stream upon splice message arrival
- Offline confirmation of splice and content
- Long-term storage of logs
- Report generation of summarized or consolidated user specified parameters
- Simple, easy to use and customizable control and interface (GUI)
- Flexible and scalable real time performance analysis of RF, MPEG-2 Transport Stream, and program insertion
- Supported on DVStation, DVStation-Remote, or DVStation-IP

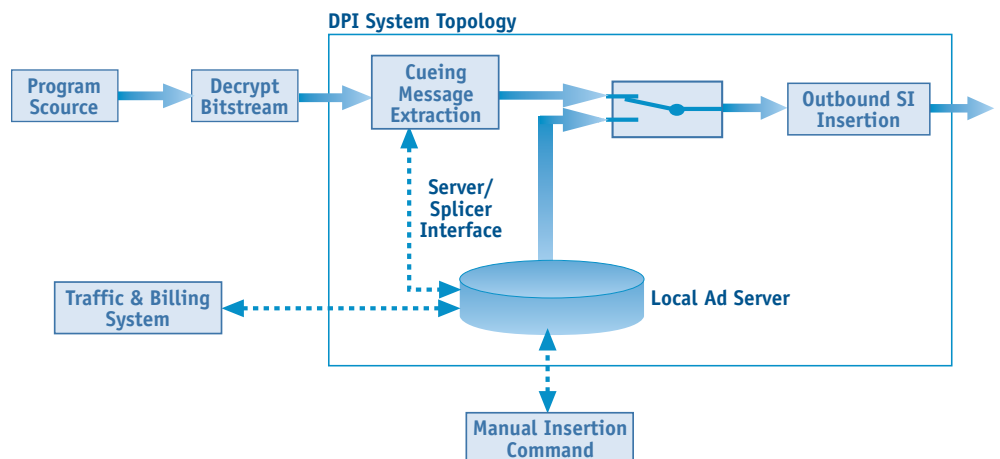


As broadcast technology advances and accurate program insertion becomes more challenging with digital, compressed transmission of television, radio, and multi-media services, traditional insertion techniques using analog cue tones or DTMF tones are no longer viable. This evolution towards digital networks, coupled with the importance of advertising as a revenue source has made it crucial for a flexible system that is capable of monitoring more complex transport streams, and also identify erroneous ad or program insertions.

## AUTOMATIC DIGITAL SPLICING

Pixelmetrix's DPI Auditor supports the new ANSI/SCTE 35 2001 standard that defines a fully digital mechanism to control remote splicing equipment via cueing messages embedded in the transport stream. These messages contain unique splice event ids which indicate a current or future *avail* – a timeslot sold to local operators to insert their own commercials. The core of the standard is centered on an *SIT* (Splice Information Table) which can contain a *schedule* message or an *insert* message. An *insert* message identifies a specific *avail* by a unique event ID, the starting time of the event, and the duration of the break.

Ad insertion systems separate splicing commands from the inbound transport stream, switch between the network feed and the local ad server, and provide signaling and coordination with the local ad server or VTR.



## FULL SUPPORT FOR DPI

Pixelmetrix supports DPI on two tiers: a built-in function in DVStation and DPI Auditor, a separate DPI analysis application with enhanced features.

Feature	Standard DVStation	DPI Auditor Application
Display DPI messages in Table Decode Window	✓	✓
Log arrival of DPI message in X/VNC Log Window		✓
Log arrival of DPI messages in HTML interface		✓
Filter log display based on user criteria		✓
Execute alarm on arrival of DPI table		✓
Execute alarm on arrival of specific field within a DPI table		✓
Long term storage and retrieval		✓
Report generation		✓

While the basic DPI function that comes with the standard DVStation software displays and decodes DPI messages, the DPI Auditor boasts enhanced features including expanded logging and analysis features like online logging of all messages, offline confirmation of splice and content.

## A COMPREHENSIVE PREVENTIVE MONITORING SOLUTION

DPI Auditor is compatible with Pixelmetrix's award-winning family of products – DVStation, DVStation-Remote, and DVStation-IP. Overall, the DVStation Preventive Monitoring Platform provides real time performance analysis of RF, MPEG-2 Transport Stream, and program insertion. The system is also highly flexible with the availability of four and twenty-one port versions with any combination of RF, ASI, or SDI.

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## EFFECTIVE MONITORING AND VALIDATION

The DPI Auditor provides an expandable range of monitoring and validation capabilities. Incoming splice message validation, online logging of all messages, capturing of incoming and outgoing transport stream upon splice message arrival, and offline confirmation of splice and content are crucial to accurate verification of the DPI process. Other features include incoming splice message validation, capturing incoming and outgoing transport stream upon splice message arrival, alarms on arrival of user selectable tables or fields, long-term storage of logs, and search capability for easy retrieval of logged information for verification. Customized reports can also be generated based on summarized or consolidated user specified parameters. These reports can be useful for billing verification or other specific needs by extracting only messages pertaining to a specific service, PID, or provider.

### Event & Splice Logging

[Main On-Director](#)
[Measurement On-Director](#)
[View Summary Report](#)

DVStation



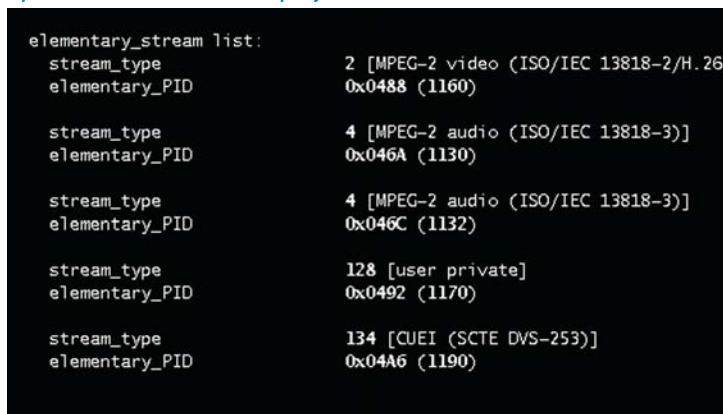
Houston Splicing Log (splicelog.20030515.2)

[View as text \(tab-delimited\)](#)

Port 4 (04)

Time	UTC Time	Message	Type	Event ID	Comp List	Unique ID	Avail	Count
14:55:05.412	06:55:05.412(+8.0)	04 Insert Splice	511234	CNN (0x101, 0x102, 0x103...)	87612	1	5	
14:55:10.412	06:55:10.412(+8.0)	04 Schedule Splice	511235	HBO (0x201, 0x202)	42876	2	3	
14:55:15.419	06:55:15.419(+8.0)	04 Cancel	501180	ALL	23251			
14:55:20.417	06:55:20.417(+8.0)	04 Splice	511236	ESPN (0x301, 0x302, 0x303...)	12451	1	2	
14:55:25.413	06:55:25.413(+8.0)	04 Splice	511237	ALL	23252			
14:55:30.412	06:55:30.412(+8.0)	04 Insert Splice	511238	CNN (0x101, 0x102, 0x103...)	87612	2	5	
14:55:35.419	06:55:35.419(+8.0)	04 Insert Cancel	511234	HBO (0x201, 0x202)	42876	3	3	
14:55:40.413	06:55:40.413(+8.0)	04 Insert Splice	511240	CNN (0x101, 0x102, 0x103...)	87612	3	5	
14:55:45.415	06:55:45.415(+8.0)	04 Insert Splice	511241	ALL	44332			
14:55:50.426	06:55:50.426(+8.0)	04						

### Splice Table Decode & Display



elementary_stream list:	
stream_type	2 [MPEG-2 video (ISO/IEC 13818-2/H.264)]
elementary_PID	0x0488 (1160)
stream_type	4 [MPEG-2 audio (ISO/IEC 13818-3)]
elementary_PID	0x046A (1130)
stream_type	4 [MPEG-2 audio (ISO/IEC 13818-3)]
elementary_PID	0x046C (1132)
stream_type	128 [user private]
elementary_PID	0x0492 (1170)
stream_type	134 [CUEI (SCTE DVS-253)]
elementary_PID	0x04A6 (1190)

Distributor Contact

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