Sensor

NEWS FROM PIXELMETRIX

Issue 82 - June 2009

HIGHLIGHTS

- QoS with H.264
- Electronic Couch Potato™ (ECP): TCL Scripts

SEE US HERE

➡ SMPTE Australia 2009
July 21-24, Sydney
Booth G35

Ensuring QoS with H.264 video services

Operators are always running into bandwidth ceilings in their quest to increase the number of services provided to their customers. Migration to the H.264 codec from the legacy MPEG-2 codec has increased the capacity of any given transmission channel. The higher complexity of coding in the H.264 system however makes it very susceptible to distortion from lost packets of information. Subscribers are paying to watch television, and disruptions or inferior quality transmission is a main contributor to "subscriber churn".

Read on...

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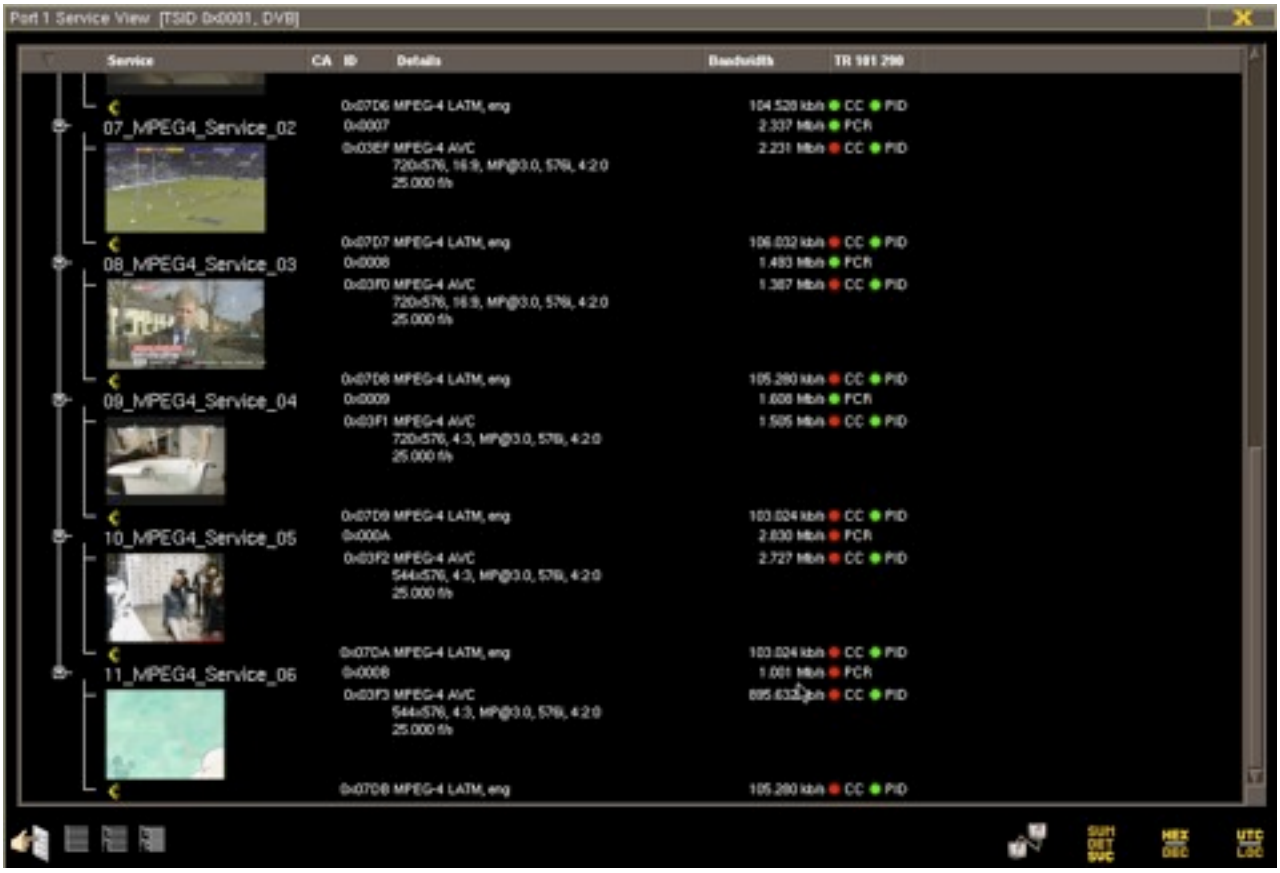
Ensuring QoS with H.264 video services continued...

Pixelmetrix has a wide range of comprehensive monitoring equipment that helps operators ensure that the subscriber can watch his program, H/264 service or not. Pixelmetrix DVStations monitor the physical status of any given channel, as well as the SI/PSI layer of transport stream. This helps to ensure that all the packets are arriving as expected and that all services are accessible.

The H.264 codec uses inter-coding - each frame in the video transmission is dependent on the frames that arrived in order before it. Hence, the loss/corruption of a video frame can wreck havoc on the quality of service. The Pixelmetrix DVStation-Mini[2] family and the DVStation-IP[3] monitors video services (H.264/ MPEG-2) fro freeze-frame and black-out errors. These are the most common symptoms exhibited in a faulty transmission channel, and the first thing that a subscriber notices.



The DVStation can generate video thumbnails for all services. This allows operators in the NOC to keep an eye on all the services on a transmission channel, from deep within the transmission network. The DVStation also displays the metadata accompanying the video service to ensure that the services are set up correctly.

TCL Scripts: The Power of the ECP™

The ECP is a flexible test robot capable of executing arbitrary user-written test scripts. Test scripts are written in the commonly used TCL language (pronounced as 'tickle'). The ECP is no ordinary monitoring probe - the power lies in YOUR hand. Scripts make the ECP work for YOU.

The possibilities are limitless. A test script decides the sequence in which channels are scanned, tests to perform on a channel, the logic of alarm generation and the sequence of steps to perform if a channel is found in error.

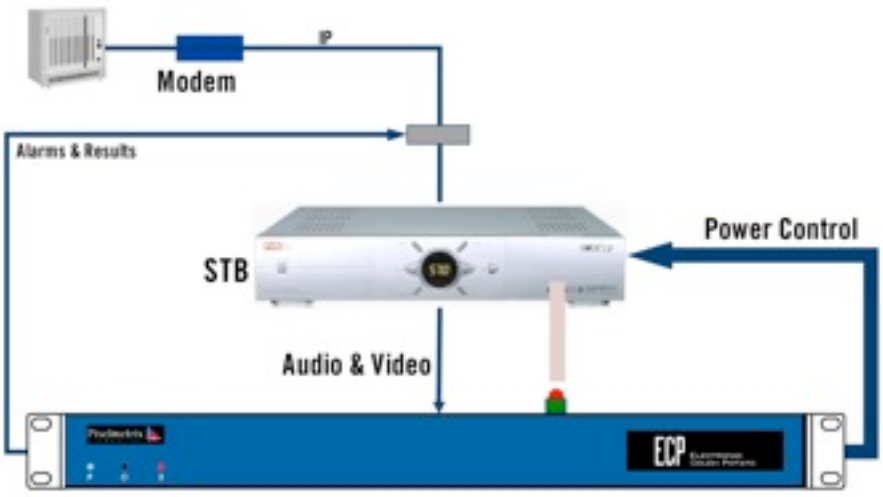
The scripting framework completely empowers the user to make the ECP function and react exactly in accordance with the monitoring requirements at that location. All ECPs in the network can be configured with different test scripts using the ECP Consolidator, and work according to the monitoring needs of that particular location - only HD channels need to be monitored or channels have to be scanned in the shortest time, or stay tuned to a particular channel and test continuously for Video Freeze.

A Test Script can:

- ✓ change channel sequence (random or sequential)
- ✓ omit a channel
- ✓ omit a test
- ✓ perform tests on a channel in parallel or sequential order
- ✓ press common remote control buttons
- ✓ reverse the logic of alarm detection (eg application in detection in CA verification)
- ✓ user-defined actions on problem detections (eg can keep tuned to the problem channel for 200 secs and not scan to the next channel immediately)
- ✓ change threshold values for specific tests

The complete solution comes prepackaged with sample test scripts all using the extensive library of ECP specific TCL functions. The test scripts available in the ECP can scan the channels sequentially or in a random order. The scripts demonstrate the capability of the ECP to perform tests on channels in parallel or in a serial fashion.

With every software release, we are continually adding new TCL commands to the solution to enable users to derive optimum competence and efficiency from the platform.



Tradeshow Reports

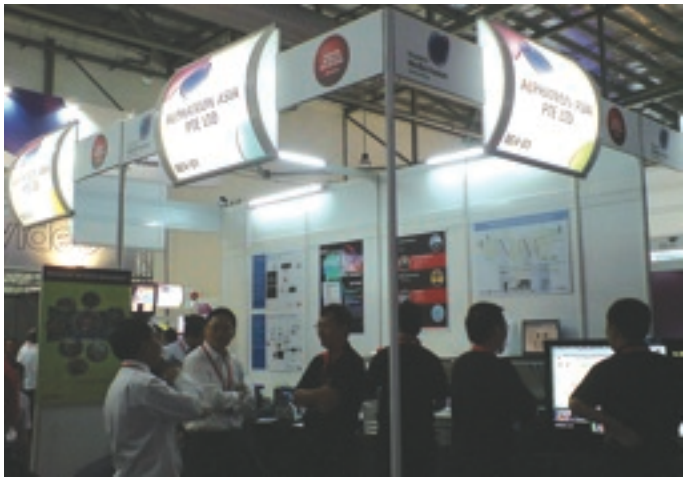
BroadcastAsia, Singapore

At the Singapore Pavilion, booth 8E4-01, Pixelmetrix highlighted its Transport Stream Recording solutions with Transrating and systems for MPEG-TS Analysis. Product demo line-up included the DVStation-IP³ (Video over IP Quality Assurance), DVStorIP-Gen (Test Stream Generator), DVStation-Mini² DVB-T (Comprehensive TS Analysis) and DVStor (Compliance Recording).

On Day 3 of the event, Danny spoke at the BroadcastAsia Conference, 'Realizing IPTV' session, where he discussed “Are people still watching Television on a TV set or a Computer”.

During his presentation, he covered the consumers' expectations out of their TV programming services, setting a standard on viewer experience, and more.

Pixelmetrix presented its line-up of Test & Measurement solutions with Alphatron Asia, the authorized distributor in Singapore.



DVStation
DVStor
DVShift

About DVStation

Pixelmetrix has focused on creating a single self-contained monitoring station that can analyze thousands of parameters within hundreds of digital television signals. Through the use of plug-in modules and parallel processing, it can monitor all these parameters real-time, simultaneously and continuously. Whether it is monitoring for compliance of an RF carrier, MPEG transport stream, picture quality or program content, development efforts are targeted at assuring the quality of the signal, integrity of the program service and delivery of essential technical information to the right people, in a timely and meaningful manner.

The DVStation-Remote is a compact version of the flagship DVStation, ideal for smaller-sized facilities. Consisting of one to four book-sized Pod modules and a single 1U rack-mounted Remote Controller, the system is operated through a LAN or dial up telephone, allowing database or user access from a personal computer.

The DVStation-Pod is a low-cost tool that can analyze and troubleshoot digital broadcast signals. Lightweight and portable, it easily slips into a tool case. DVStation-Pod borrows most of the advanced features of the DVStation, including its extraordinary user-friendly interface, on-board transport stream capture, internal playback and analysis, as well as error and measurement logging.

The DVStation-IP^3 offers a one-stop monitoring engine for IP and Transport Stream Analysis, detailed service visualization and IP Headend Output verification for IPTV networks. It provides, on all services, MPEG-2 and H.264 main profile thumbnails, Media Delivery Index (MDI) which allows packet loss and jitter measurements as well as video presence, freeze or blackout displays.

The DVStation-Mini provides a compact and cost-effective way for terrestrial, cable and satellite operators to maintain visibility of network quality and performance. It offers comprehensive TS monitoring and is optimized for remote site deployment.

TS Time Shift

DVShift

This unique product is ideal for delayed re-broadcast across time zones and provides stable, user-programmable delays from seconds to days.

DVShift is a great improvement over the conventional approach of utilizing separate audio/video delay equipment which simply does not work with the advent of multi-channel audio, multiple subtitles or closed captioning, and especially so with multimedia content such as MHP.

TS Recording & Playback

DVStor

The DVStor system provides real-time recording and playback of MPEG transport streams over a pair of ASI interfaces.

Capable of recording more than three days of MPEG-2 transport stream, the full integration with our DVStation Preventive Monitoring platform means past alarms and errors can be fully investigated and analyzed.

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