# IT Tech Tips
## Augmenting Your IT Tech Tools

### By Stu Casteel

*[March 2018] One of the nice things about the BDR is that many readers respond to articles with their updates, corrections, or suggestions. Stu Casteel enjoyed the IT Toolbox from the Wheatstone Guys. Here he adds a couple of additional tools, some aimed at the TV crowd, and his comments.*

For those of us on the "TV" side and dealing with compressed signals and files there are a few of what I consider essentials for ASI and MPEG over IP (MPEG over RF is another subject!);

As you consider these, note this caveat: I have found that when working in the compressed domain there is no one test tool that does everything or that I can trust to be the final word, Therefore, the ones I have selected here are those that are more affordable and are "mostly right."

- **Video Multimedia Player**

  VLC is VideoLAN, a project and a non-profit open source organization.

I have been using VLC for close to 20 years now and not only will it decode just about any compressed stream or file, provide basic information – it will even transcode, stream, and offer a multitude of other features for those willing to dive into its depths. It runs on Windows, Linux and Mac OS.

And the best part: it is free!

- **Deep View Into Compressed Video**

  For a more in depth look at all things compressed, the Thomson Video Networks (now Harmonic) AVC Analyzer is my choice. The Aud-io/Video Codec Analyzer, available as standalone software, is a file-based media analyzer offering decoding and high-performance analyses for current and future generations of compressed audio/video.

  The AVC includes the widely deployed MPEG-2, H.264/AVC, and VC-1 compressed video formats, and supports H.265/HEVC (High Efficiency Video Codec).

In addition to video analysis, the Audio/Video Codec Analyzer is suitable for a wide range of compressed audio formats.

The tool not only decodes MPEG Audio, Dolby® Digital (AC-3), Dolby® Digital Plus (E-AC3), and AAC, but it also displays their main characteristics and waveforms, and establishes the crosslink with the corresponding picture in the stream.

This is a professional tool, and is priced as such.

- **MPEG2 Transport Streams analyzer**

For a more in-depth look at MPEG2 Transport Streams, the TSReader analyzer is a handy tool. It allows inspection and recording of data carried in television streams used for satellite, cable, off-air and IPTV streaming.

TSReader supports ATSC, Digicipher II, DVB, ISDB, and SCTE extensions to the base MPEG-2 specification. TSReader gives the user the "big picture" overview of what is being carried inside MPEG-2 transport streams and can be very useful for finding errors or inefficiencies.

TSReader works with an ever growing number of input devices and files and, depending upon the version, provides details of descriptors, real time PES rates (Program Elementary Streams), mux usage, closed caption (EIA-608 and CEA-708) decoder, and SCTE-35 messaging and logging, just to tick off a few of its capabilities. It also interfaces with VLC and the DTU-245.

There are three versions (Free, $99.00, and $399.00) and for most folks the middle version is sufficient.

- **ASI/SD-SDI USB interface**

DekTec is a manufacturer of PC add-on cards, USB devices, IP converters, and software for the professional digital-television market.

The DTU-245 ASI/SD-SDI USB interface is always in my backpack ("I don't leave home without it!"). Along with StreamXpert it provides a very useful tool for TRT 101-290 analysis.

Full disclosure; I own a few of these, as well as other interfaces and software from DekTec. All are great tools.

They are not free and, depending on what pack-ages you want, you can be into the low 4 figure $'s early on. Nevertheless, it is worth every cent.

- **IP Probe**

I use the VB-12 from Bridge Technologies (Sencore in the US) VB-12 for longer term remote monitoring of problematic intermittent Transport Stream issues.

The VB-12 is fully self-contained requiring only transport(s), mains, and an IP address. It includes both GigE and SPF optical IP Transport inputs as well as ASI I/O – rugged and fan-less it easily lives behind the rack and is remotely accessible.

Again, not an inexpensive item, but a very useful diagnostic for those hard to catch intermittent errors.

- **WLAN Detection**

Another handy tool in addition to Angry IP scanner in last week's note's NetStumbler is a handy tool for Windows that facilitates detection of Wireless LANs using the 802.11b, 802.11a and 802.11g WLAN standards.

You might be surprised at what you find!

- **Crossover Cable**

Finally, some comments regarding the Cat

5/6 Crossover cable: most modern laptops have native GigE Eth ports.

In fact, all my laptops for the last ten years have native GigE Eth ports eliminating the need for a crossover cable

One of the features of GigE is that it is auto-sensing and other than some early 10BaseT devices will work without the need for a x-over cable.

We hope these tools will become among your favorites, too.


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*Stu Casteel started in "TV" in the late '60's (and has the scars to prove it) including stints at IVC, Consolidated Video Systems, HP, Video-Stream, Sony Systems, Grass Valley, DiviCom, Harmonic and Thomson to name a few.*

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