CEDAR Cambridge Version 11

The sharpest tool in the box got another cutting edge
BILL LACEY reports on a restoration powerhouse

The new Cambridge Version 11 offers some dramatic additions and improvements to CEDAR's flagship audio restoration system including a software version (called DNS Two) of the DNS 2 hardware unit, a vastly improved DeClip-2 module and Trinity Enhance, which is derived from the CEDAR Trinity surveillance system.

DNS Two builds on the power and simplicity of the industry-leading DNS One dialogue noise suppressor and introduces a new algorithm that excels at removing the background noise that often accompanies dialogue. Rather than taking a spectral fingerprint of the noise, as many less effective noise reduction systems do, DNS Two divides the incoming signal into multiple frequency bands that are adaptively analysed without user intervention. The algorithm suppresses the noise independently in each of these bands, and just three simple controls are needed, which are divided between two zones — Threshold and Reduction. The Learn button enables the noise detection, and it's best to leave this engaged at all times as it will dynamically react to any changes in the content of the input signal. A Bias control offers the ability to bias the noise detection toward identifying more noise (resulting in a drier signal) or preserving more ambience (leaving more of the atmosphere of the source recording), depending on the preferred result. The Attenuation control then adjusts the degree of noise reduction.

When considering which DNS tool is the better choice I found DNS Two better suited to noise that I would describe as being "full" or "dense" or simply "overwhelming". Just a little bit of reduction goes a long way, as they say, and it doesn't take much to make a substantial improvement. It can be just as effective on less complicated material, but I find its real strength lies in its ability to take a hammer to problem material and provide you with a cleaner and

better sounding result than you're going to get from any lower cost competitor. DNS One would then be my go-to choice for matching dialogue tracks and any situation where the fine control of the noise reduction in the frequency bands is needed. To test DNS Two, I ran through it a plethora of difficult material that had proven challenging even for DNS One, and it did a superb job. The combination of DNS One and DNS Two is a restoration powerhouse duo that could handle almost anything I threw at it.

DeClip-2 improves upon the previous Declip by improving the algorithm and adding an adaptive Auto mode. With Auto engaged it will automatically track the signal amplitude, find the clipping points, set the clipping gates in real time, and output a clean result with restored dynamic range. This allows for true "set it and forget it" operation and you can therefore use it with confidence in the Batch Processor. (The original DeClip could not really be used effectively this way since it was necessary to set the clipping gates manually and monitor the results to be sure they were set correctly.) This will be good news for archives that have thousands of clips to process because these will no longer need to be individually vetted. It's almost unfair to say so little about DeClip-2: it's easy to use and sounds better than any competitor.

Trinity Enhance is something a little different from the usual fare. Derived from CEDAR's Trinity 2 surveillance system, it provides a toolset of four filters — Speech, Noise, Background and Motor — designed to tackle the extreme audio challenges typical of surveillance work that is less concerned with tonal quality and more concerned with intelligibility. To that end, Trinity Enhance does an amazing job at digging dialogue out of the most compromised situations and allows forensic labs to recreate the results obtained by CEDAR Trinity 2 users in the field.

There are a few additional CEDAR gems that have escaped notice in these pages since I reviewed CEDAR Cambridge v8. The most important of these is FNR, a broadband noise reduction module for dialogue. FNR is designed specifically for dramatically degraded audio that can't be adequately improved using any of the DNS modules. Whereas DNS is primarily concerned with the quality of the source dialogue, FNR is all about intelligibility. To that end, if you're working in documentary filmmaking, news gathering, or sports broadcasting you will have certainly found yourself struggling to rescue speech that is overwhelmed by background noise of one degree or another. When all else fails, FNR is the tool to turn to, and I've been able to improve audio that I might otherwise have given up upon (and then had to deliver the bad news to my clients). In a few cases, post EQ was necessary to restore some fullness that was lost in the removal of the background noise, but this was a small price to pay for being able to salvage otherwise unusable dialogue. FNR differs from the DNS modules by also offering three Resolution settings, allowing the user to balance the ability of the algorithm to recognize spectrally complex noise against CPU load. High resolution often offers the best results, but it did tax my Series III hardware when some additional modules were active in the processing chain. Time to upgrade to a Series IV! A final word about FNR is that it does take a little more effort to use than DNS to get the best results when working with massively compromised audio.

History Sessions (which first appeared in Version 10) is another feature worth mentioning. CEDAR Cambridge now tracks every step and saves a complete Undo/Redo history that allows users to backtrack from the very first time the session was worked on, not just since the most recent opening of that session. Session files contain an EDL detailing all of the work done on the audio, along with the original and processed audio and screenshots of spot processes. This offers tremendous flexibility should you ever need to return to a state from an earlier date. You can also document each step for verification when doing forensic work.

I've been using CEDAR since the first DOS-based systems in the early 1990s. Each generation offers another round of innovations that continue to raise the bar that others can only hope to match. CEDAR Cambridge Version 11 continues the tradition of quality, excellence and ease of use that allows the company's end-users to meet or exceed client demands. If you want the best, there's no other option. ■

PROS	DNS Two - power and simplicity. DeClip-2 "set it and forget it" Auto mode.
CONS	I think that I'll need to upgrade my Series III hardware.

Contact
CEDAR, UK
Web: www.cedar-audio.com