Pro Tools Nation

Butch Vig shows you why a little software program is making studio owners nervous

Listen to Gavin Edwards' "I'm Hungry" (produced by Butch Vig)

I've long thought that only one thing stood between me and rock stardom: musical talent. But now that I'm sitting in Butch Vig's basement, recording my first single, that doesn't seem like such a great obstacle anymore.

What technological miracle has made it possible for me to record music that other people might want to listen to without stuffing jelly into their ears? It's software called Pro Tools, which has transformed the world of audio recording. It has freed artists from the confines of traditional studios; it has made professional sound available to people on a budget; and as new technology always does, it has changed the music itself.

Pro Tools is a software program that replaces the old infrastructure of recording - huge analog mixing boards, rolls of two-inch-wide magnetic tape - with a computer. Many musicians now cut tracks straight to a hard drive, which means that lots of expensive tape machines are now collecting dust. "We have analog at our studio in Minneapolis, yet we rarely turn those machines on anymore," says R&B producer Jimmy Jam. Some estimate that four out of five current pop albums employ Pro Tools or one of its competitors. While Digidesign, the maker of Pro Tools, took in $136 million last year, many older studios are feeling the financial pinch. New York's Greene Street Studios, where Public Enemy recorded many classic tracks, shut down in 2001. Other studios are finding that the only way to stay in business is to make sure they have Pro Tools workstations for their clients.

Since Pro Tools can run with just a moderately powerful laptop and a few accessories, musicians can get professional sound just about anywhere. "The traditional studio is a windowless place on a back alley somewhere," says Brandon Boyd, lead singer of Incubus. "You can get horrible cabin fever, like being in a dentist's office twelve hours a day." So to make last year's Morning View, Incubus used a Pro Tools setup in the living room of a Malibu house with an ocean view.

For established musicians, escaping the studio means better vibes; for acts that are just beginning, it means they can afford a professional-sounding demo or album without having to sell a kidney. It's already happening: Dirty Vegas' home recording of "Days Go By" became a club hit. The group could experiment with different sounds and vocal filters because the clock wasn't running in a thousand-dollar-a-day studio.

Butch Vig is the drummer for Garbage and has produced blockbuster rock albums including Nirvana's Nevermind and the Smashing Pumpkins' Siamese Dream. For some reason, when I tell him I haven't played guitar in ten years, he doesn't throw me out of his basement into the Los Angeles night. He just opens another bottle of wine.

Vig has a $15,000 home studio, with a professional edition of Pro Tools running on a G4 Macintosh. But you can buy a scaled-down version of Pro Tools for $495 that's pretty robust; the software also works on a Pentium 4 laptop or Powerbook. That $495 provides a consumer with a studio setup that would have cost tens of thousands of dollars only five years ago. When he's traveling, Vig stuffs a
duffel bag with a laptop, a miniature keyboard and Digidesign's Mbox processor (the extra hardware you need for Pro Tools - it's about the size of a trade paperback). He has remixed Garbage songs on plane trips.

Pro Tools offers two basic ways to look at a song. The "mix" interface simulates the traditional appearance of a mixing board. More powerful, however, is the "edit" interface, where you can see the music in horizontal bars, scrolling left to right on the screen. The sound waves look like a seismogram of an earthquake: When you make noise, be it a guitar chord or a cymbal crash, it's represented by jagged spikes. The bassist came in a half-step late? You can match the bass line up with the drumbeat by clicking and dragging it with the mouse. This was once a job that could take an engineer hours splicing tape with a razor blade. Now it's as easy as copying a paragraph in word-processing software.

I've written a song called "I'm Hungry," reasoning that food is a primal need that is underrepresented in pop music. We pick a tempo, dialing it up and down until I feel comfortable: 124 beats per minute. Vig puts in a click track. "What do you want the song to feel like?" he asks.

" 'Barracuda,' by Heart," I say.

To get that galloping rhythm, we need floor toms. Most synthesizers come with a collection of percussion sounds, but Vig has recorded his own. With two fingers on the synth, Vig plays a drum pattern for about a minute. He plays back his performance and decides he likes the sound of the fifth bar best. He pulls it out and, with a few keystrokes, extends it for ninety-nine bars.

We add drums and cymbals the same way. "You can lose your mind when you have 200 tracks," Vig tells me. "Half the problem is coming up with names for all of them." He shows me the files for Garbage's "Shut Your Mouth," where tracks have names ranging from "Ringo" to "DJ Sloppy" to "Winnie the Pooh."

Vig decides the rhythm needs a little extra kick, so he pulls up a computer file filled with ready-to-wear drum loops. I pick number twenty-one, which has a James Brown feel. Unfortunately, it's recorded at a different tempo than our chosen 124 bpm, so it doesn't fill out a full bar. No problem: Vig has a plug-in.

One of the strengths of Pro Tools is that you can add endless software plug-ins, each of which lets you manipulate the sound differently. Want to simulate a classic guitar pedal or fix the pitch of a vocal performance? Somebody's selling a plug-in that will do it. (Vig says that whenever Garbage get a new plug-in, they play with it compulsively for several days, trying it on every sound. Some warn that this is one of the dangers of Pro Tools: It's easy for novices and professionals alike to get entranced by studio frippery and overproduce a track.)

Over my protests, Vig thrusts an electric guitar into my hands. In the finest tradition of lazy lead singers, I haven't bothered working out any music for my song. I remember how to play exactly two chords: D and G. So I play along with the drum track for a few minutes, bashing out every combination of D and G I can think of.

We listen to the playback. "That sounds like a verse," Vig says at bar twelve. "And that sounds like a chorus," he says at bar twenty-six. When I agree, he pulls out the chosen chunks of guitar, lines them up with the beat and repeats each four times. Presto: a complete verse and chorus. I couldn't re-create what I played, but it sounds pretty good.

Vig adds a bass line, and I contribute some cowbell and hand claps for a percussion breakdown halfway through the song. Then it's time for the vocals. "Double-track it, baby!" Vig shouts. We end up triple-tracking the chorus, giving my singing some extra punch. When I listen to the vocals, I discover I've slurred the line "brine a turkey for three hours," so it sounds like "ride a turkey for three hours." That means it's time for a punch-in, replacing just that one line. Vig says this was a danger spot with old-fashioned studios: "There were many times when an assistant engineer would erase part of a take."
“Can I have a key change for the final chorus?” I ask Vig. Unsurprisingly, he has a plug-in that does exactly that. We add a few final bits of “ear candy,” he burns a CD, and then I’m holding my first single, courtesy of the most patient producer in rock & roll. It’s taken us only three and a half hours; our Pro Tools session has thirty-five tracks.

As I leave, Vig offers a historical note, reminding me that Pro Tools makes high-gloss sonic polish available on a budget but doesn’t substitute for musical genius: “The Beatles recorded Sgt. Pepper’s on four tracks.”

GAVIN EDWARDS and DAVID THIGPEN
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