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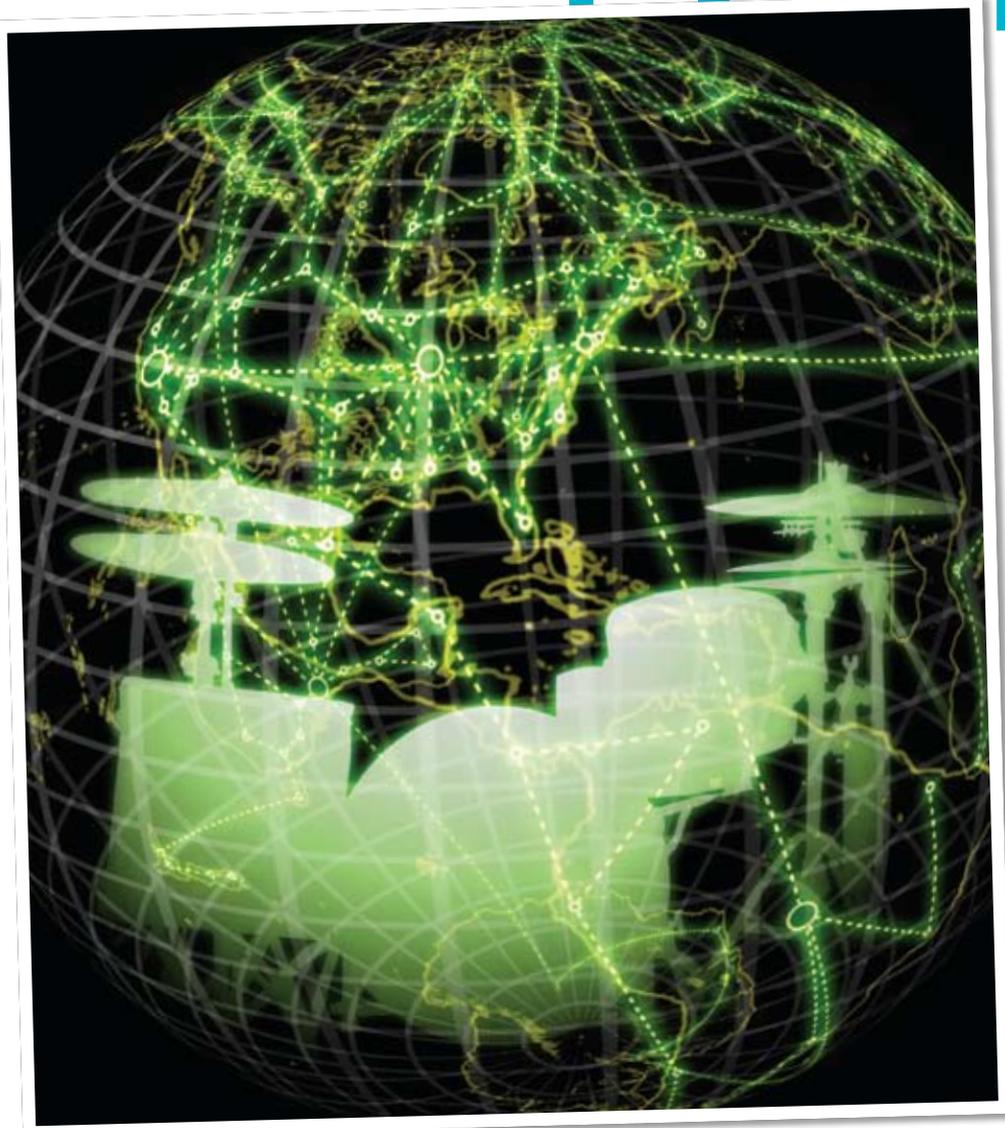
SETTING UP A REMOTE RHYTHM FACTORY TO SERVE THE WORLD

By Jake Wood

It's the tenth hour in the studio, eight takes deep into the third song of the day, and the once-congealed sweat is beginning to liquefy again. All alone, with one eye on the clock and the other on the waveform, that inner perfectionist with the unwavering work ethic may very well be your worst boss to date. Of course, it's not really that bad. After all, drumming in the buff has its perks, right? (Nevermind the chafing.)

Alas, staggering advances in online technology have made this paradisiacal private recording situation a reality, thanks to computer nerds who have constructed an environment that caters to their one true wish: isolation from physical social interaction. Hooray! Let us rejoice, but separately, and alone in the privacy of our own darkened rooms.

Not surprisingly, musicians are now embracing these hermit-friendly electronic pathways (perhaps with a little less Grinchism) and collaborating with complete strangers in faraway lands to form a new monster on the block: the "Internet band" (pants optional). Unlikely to ever eclipse the iconic "garage band" (pants mandatory — preferably leather or spandex), it certainly adds some new dimensions to the meaning of being in a band and music making in general. This may be stretching the boundaries of the traditional



definition of a "band," but Internet-facilitated music production is gaining ground as a viable means to recording albums for solo artists, producers, and bands with vacant positions.

So why partake in such solitary revelry? Is not the camaraderie of four dudes (or dudettes) in a garage half the fun? To start, there are no geographical limits. No bridge tolls, no border crossings, and most impor-

tantly: no schlepping. A drummer living in Hoedunk Town, Nowhere U.S.A., population: six, musician: one, might not have many musical options, but with Internet access, he can reach out through cyberspace and tap

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more musically prolific areas. So let us examine not only the plethora of reasons to go into online recording, but also take a look at how we can simplify setting up an Internet-based remote-recording drum factory.

But before you go plundering your college funds without a business plan, it's helpful to first hypothesize in what type of situation you'll be using these remotely manifested drum tracks. Identify the customer. Internet-based recordings can be made for a local DIY indie band down the block, a major-label solo artist across the Atlantic, or a web of collaborating hobbyist musicians spanning the globe. With this large and diverse variety of possibilities, you can arrange customers into two simple categories: professional and non-professional. For the sake of this article, let's assume both categories include financial transactions, thus rendering them virtually identical, except for the fact that professional settings mean there's an engineer on board (at the other end of the

cyber highway), and the hub of the project is at a legitimate recording studio, not somebody's bedroom. The primary reason for this demarcation is to choose a software solution that will suit the customer best.

Pro Tools Or No Tools?

The first dilemma is whether or not to purchase Digidesign's Pro Tools. This single decision greatly impacts the recording and transferring processes. Currently, Pro Tools holds a frustrating monopoly on professional recording studios (which may diminish soon if Digidesign doesn't step up its game), even though its popularity in the rest of the recording world is merely lukewarm. In the "pro-summer" market, anything goes, from ADAT's to stand-alone digital workstations to Apple's Logic. Unfortunately, there is no leading trend in this field. While crossing platforms isn't a big issue — it does take a little strategic housekeeping in order to prepare the files — choosing a platform that the majority of



Pro Tools is a digital audio workstation platform for Mac OS and Microsoft Windows operating systems, developed and manufactured by Digidesign

the clients will also be on can save time and needless brow-furrowing frustration. So if it's a professional situation and clients are primarily using professional recording studios for all other ends of the recording, it's best to bite the conformity bullet, kowtow to Digidesign, and purchase a Pro Tools rig. If instead the drum tracks are being sent to someone's bedroom, then it really doesn't matter which multitrack software is used, as cross-

ing platforms within multiple unprofessional settings is inevitable. Those wishing eventually to acquire more professional work in the future might as well purchase Pro Tools to start, because other platforms will only hinder this advancement.

Because Seven Ate Nine

The other issue to consider in conjunction with the software is the hardware: What is needed from an audio interface? The primary concern is the number of inputs. Recording drums can be done with anywhere from one to twenty microphones. A typical setup involves nine inputs: one kick, two snare, three tom, two overhead, and one room. Many audio interfaces are a tad shy and only accommodate eight inputs. Clients can be picky, and many musicians and engineers will request specific mike setups, so it's sometimes necessary to have a hi-hat mike, two kick drum mikes, and maybe some additional room mikes. While these more elaborate setups add layers of richness and flexibility to a mix (as well as a potential jumble of phase issues), it is very possible to be up and drumming with only eight tracks. It's recommended in this eight-input scenario to purchase an interface with some form of expandable options, such as ADAT (eight inputs) or S/PDIF (four inputs), which allows further expansion from additional inputs of various supporting preamps (for exam-

STUDIO SECRETS

By Jake Wood



An Engineer Needs A Maid (for platform swapping)

Cleaning up after yourself within a multitrack session file is the pits. Why can't our mothers do this for us? Life is so unfair! While sending that luddite of a mother off to night school to learn some editing and beat quantizing, it's time to prepare a session file to be transferred to another studio with a foreign recording platform. Because handpicking files manually can be both tedious and prone to error, here's an efficient method to reorganizing within the session for a smooth transfer.

Prior to operation housekeep, the best take must be identified and approved first because that's the only take that will be sent. Begin by printing a rough mix of the breadwinner, then convert it to mp3 (iTunes does this, as

does the most excellent Lame-brain), and email it to the client for approval. After a yea or nay, it's time to start cleaning up the session. While it's always great to keep every take, sending only the best is recommended because A) nobody wants to sort through all of the B-sides; B) most botches deserve to never grace another ear drum; and C) sending only the best prevents a non-drummer from choosing something that might otherwise be embarrassing to us persnickety drummer folk.

To begin cleaning house, always start with a "Save As!" Never erase or overwrite audio from the original session. With the replica session, begin by deleting all unused playlists. Then look for all unused waveforms or

regions (in Pro Tools the shortcut is Command+Shift+U) and remove (not delete) them, from the session (Pro Tools shortcut: Command+Shift+B). If any punches or edits were made to the final take, it's necessary to consolidate the files (Pro Tools shortcut: Option+Shift+3) as this will make an entirely new single waveform file that can be effortlessly dropped into a different platform.

The final step is to save it yet again, but this time to "Save Copy In." Make sure to create a different folder for clarity's sake, and if offered, select the "Copy All Audio Files" option. The purpose of this second save is that it creates a folder by sifting out and copying only the files being used, and not the extra 20 takes that still reside in the parent folder. Voila! The new folder is ready for transfer and looking svelte.

ple, the upgraded Focusrite ISA 428). A firewire port is also handy for expanding the amount of inputs, as it can permit additional interfaces to run simultaneously. It's best to keep these options open, because if business picks up and a few extra tracks are demanded, a simple upgrade can be made in lieu of a replacement purchase.

Pre-Amptive Strike

Another crucial step in the signal chain involves the preamps. Most audio interfaces come with passable preamps, however, if there's extra cash lying around, then spending a small fortune on dedicated high-end preamps is a wise investment (rarely do they lose value with age). With the hundreds of preamps on the market boasting myriad differences, sifting for the perfect gem is an overwhelming task that deserves an article unto itself. In the meantime, a brief consideration of the main variables is in order.

There are two basic preamp types: tubes and solid state. Both types will color the signal in their own way, with solid state typically being more transparent than tubes, but it's when they are pushed to distortion that they begin to differ. Tubes distort with even-numbered harmonics that are typically considered pleasingly "warm," while solid state preamps distort with a most unpleasant clipping, square wave. The benefit to the latter is that they capture transients quicker, which can be beneficial for drums. Whether the goal is transparency or preamp coloring, another significant factor to consider is the agility of a preamp. If plans for the preamp involve multiple microphone types in various scenarios, additional features such as phantom power, phase flipping, and dB pads really come in handy when trying to match impedance levels for various microphones.

Kleine Mikrofon

As with preamps, the amount and variety of microphones to choose from can be overwhelming. The basic concepts to consider are that microphones both sound and function differently from each other. Whether a microphone sounds good is almost purely subjective, but how one functions is elemental in building a

drum mix. The standard practice is to track drums with a mixture of primarily dynamic microphones and a few condensers. Due to their ability to be a little less sensitive than condensers, dynamics handle loud noises with high SPL's better, and are therefore commonly found dangerously close to the strike zone. Condensers, on the other hand, are usually found on the fringe of the drums in the overhead and room zones, as they happen to have wider dynamic and frequency ranges. For those wishing to get a little mavericky with their mikes, here is a brief rundown of the most common microphones used to record drums.

For snare drums, Shure's SM57, the audio world's warhorse of wonder, is a cheap and amazingly rugged microphone that has earned its keep in the best of studios for a variety of uses. It always sounds good on a snare, and perhaps its



The five-position bass control of Sennheiser's MD 421 II dynamic microphone makes it a reliable selection for recording tom sounds

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only drawback is its overuse. For kick drums, AKG's D112 has dominated the field primarily because it has been tailored for the bass drum. While it certainly sounds great, it has a built-in EQ pattern that limits its versatility. Tom sounds have been predominantly captured since the 1960's by Sennheiser's 421's, which, in its Swiss-Army-knife-like agility, is also similar in application to the SM57. Just be careful with its clumsy drop-n-break mounting system. For overheads, hi-hats, and room sounds, condenser microphones are the preferred choice, but unlike the close-mike environment, there's no popular tool for handling these tasks. Favored selections for these three positions include small condenser pencil mikes, such as the discontinued Neumann km84, and large-diaphragm condensers, such as AKG's 414 models.

Platforms That Match The Uniform

Once all the necessary gear is in place, a client is secured, and a song is ready for butchering, stop. Before rushing to the downbeat, do a little prep work by determining how the session will be transferred. If working from the same platform on both ends, it's most definitely best if the client can email a paired-down session file from the mother session with only an mp3 of the tune that sits in the same place in "time" as its master and is mapped to a click. If this cruise-control scenario is impossible, it's absolutely necessary to find and match the bit rate and sample rate of the client's session. If they aren't uniform across platforms, the drums will sound drastically wrong on the receiving end.

For the ultimate in irreversible bonehead moves, the drumming might even be executed while tracking to an mp3 at an incorrect speed and pitch thanks to a mismatched sample rate. While it's possible to fix the former by up-sampling and down-sampling, it will degrade

the audio and waste a lot of time. Regardless of platform, sample rate and bit rate need to be consistent with both ends of the recording.

If crossing platforms is inevitable, labeling tracks and folders clearly is absolutely essential. Clients will be importing individual wav or aiff files from their browser, and not a session file. If the tracks start with an obvious name at their origins, that translates to less aspirin later. For organizational purposes, when tracking multiple songs, it really is best to record each song as an individual session. That prevents "kick.07" and "kick.08," which might have been from two different songs, from being mistaken as part of the same song, as they will be saved in different folders.

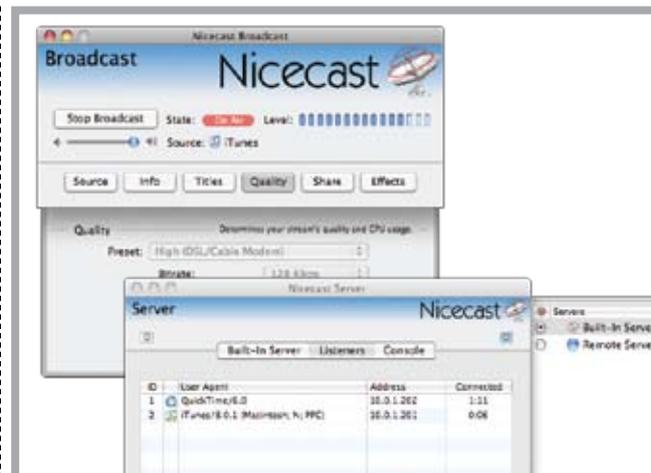
The last critical element to a smooth platform swap is maintaining a clear start-time uniformity between the reference mp3 and the tracks being recorded. To ensure proper time placement and groove integrity, it's best to have the recording start at the exact same place as the mp3 file. This is the most accurate method

IN THE UNLIKELY EVENT OF A WATER LANDING OR A REJECTED DRUM TRACK, IT'S BEST TO HAVE A POLICY REGARDING REVISIONS

for importing, as simply placing a track on a downbeat is far more arbitrary, especially when human error comes into play. Assuming the start-times are uniform, clients will be able to drop the files into their own session and line them up perfectly with the original reference mix, which should also be in sync with the rest of their session.

Solitary Refinement

After navigating technical issues, the next dilemma, which happens to be unique to solitary remote recordings, is a musi-



An easy way to broadcast music from OS X, Nicecast can help you create your own internet radio station or allow you to listen to your iTunes music library from anywhere in the world

cal one: How is it possible to get the right parts for the song and make everyone happy if nobody's present and murderously beat boxing their rhythmic wish list (admit it, we live for those stagnant rehearsals when the singer coolly suggests an "umpa umpa squawba-dooba pssh")? Solely trusting one's musical instinct doesn't necessarily work the first time around, especially with new artists. When they aren't there to shoot down a thirty-second-

note quadruple blast fill, online relationships can quickly become muddled by differences in opinion as the results come in after the fact. In order to avoid blindly chugging away with undirected musical ideas, there are a few procedures that greatly aid in eliminating this time-sucking beast.

Installing Rogue Amoeba's Nicecast broadcasting software (\$40) or an equivalent is the first line of defense for an absentee client. With its high-quality streaming ability and its use of Audio Hijack (comes bundled with the software),

Nicecast quickly turns a computer into a broadcasting unit with a live stream of audio for anyone with an Internet connection. It's particularly cool because it functions in real-time with only about a 10-15-second delay. And it supports audio directly from Pro Tools and other platforms, so clients can monitor the tracking as it's happening. When used in conjunction with Skype, this dialogue becomes the best surrogate to attendance. Going many steps further, Source Elements' Source-Connect VST program allows the streaming of high-quality audio from one platform to another, thereby connecting two studios to the same session. Weighing in at a hefty \$1,500, plane tickets are probably cheaper, but Sour Elements also offers a rent-to-own option. Keep in mind that both parties need to have the software installed.

Technology aside, a good pre-production, heart-to-heart conversation or correspondence about a client's favorite drummers and any percussive prescriptions they desire is a simple and quick way to get on the same wavelength. After that, emailing clients rough mp3 scratch-track ideas using one mike, two or three takes, and a handful of ideas typically leads to clear skies.

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In the unlikely event of a water landing or a rejected drum track, it's best to have a policy regarding revisions. Some folks like to charge per revision, others include a single revision in their initial price, and still others have a "we're done only when it's done" attitude. These all have their pros and cons, and while revisions are inevitable, the best modus operandi is to initiate every precaution possible to avoid the situation, and to stipulate in advance how to handle such issues should they arise.

Easiest Schlepping Ever

Now it's time to transfer the raw individual files to the client. (Note: While mixing is certainly a possibility, it's most often not a great option because the song is rarely finished when the drums are laid down, and mixing is best left for a time when all the parts have been tracked.

Additionally, it's very difficult to maintain the integrity of a mix when crossing platforms.) Files can be transferred by various means utilizing both the Internet and snail mail. Emailing an entire song's worth of drum tracks hasn't evolved as a viable means quite yet (one snare track might be anywhere from 15 to 35 MB, and eight tracks multiplied by one or two takes can be anywhere from 200 MB to a hefty 2 GB, depending on sample and bit rate). Rather, it is possible to send them via an instant-messaging service, make them downloadable by posting them to a web site, or, for a more efficient method, to FTP them to a server. Additionally, there are online services such as YouSendIt.com that cater to large file transfers. Archiving the audio as zip files prior to transfer will greatly reduce the size and expedite any online delivery (both Windows and Macs

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have built-in zip software). Unfortunately, even these compressed files still take hours to upload and download. If waiting in front of a computer doesn't sound like fun, a 20-minute CD or DVD burning, a trip to the post office, and two days of waiting will take care of everything while simultaneously backing up the precious data.

Virtual Plastic

Of course, before sending the masters, it might be wise to secure some form of compensation. Due to the anonymity of the Internet, and those few shameless bad apples, trust can be a difficult bond to forge (thanks a lot, Nigeria!). The quickest way to guarantee payment is to sign up for a Paypal account as it allows individuals to accept credit cards (international transactions are supported) without any sign-up fees (although there is a minor transaction fee).

Final Thoughts

Although it probably seems pretty slick at first glance (lone

ranger of drumming = cool), the remote-recording field presents some major hurdles. Personal relationships are weak, the magic of spontaneous mutual inspiration is missing, and nobody is there to direct. Another critical flaw is the lack of a second set of ears. What drummers hear while playing and what they hear during playback are two very different beasts. Having a fellow engineer or producer opposite the glass simply listening and commenting can mean the difference between three takes and thirteen takes.

That said, the invaluable beauty of working remotely is that it affords the luxury of collaboration with people otherwise inaccessible and the leniency of experimentation otherwise stymied. Putting logistics and gear aside, legendary San Francisco producer and engineer Mike Winger brings things back to the 1, noting, "The performance really makes a far greater difference than anything an engineer can ever do." So practice up! ■