

“Chain Streaming” and “Stream Stacking”

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Here's just a really basic rundown of chain streaming.

How you go about it depends on how sophisticated and adaptable your PC is. The chief difficulty is simply getting the thing to understand that you're dealing with TWO streams and that one is coming in and the other is to go out. A simple flowchart looks a bit like this:

1. Musician A streams online (from somewhere outside my studio/location)
2. I pick it up with Winamp.
3. From Winamp, play the stream out to your hardware mixer.
4. Add your (local) live performance elements, just as though you were recording tracks with someone.
5. From the mixer, you send the mix back to the computer and then stream it out to the Internet via another program (not Winamp, usually BUTT).

Okay, that's just the flow chart. Actually getting that to happen on anything less than a custom audio computer can take a bit of hardware and tinkering.

So, our set up looks like this.....the “cheap” way to go. (Realize, this was to have my father play violin over (SL personality) Montian's stream...who does all the guitar, voice, mandolin, etc)

Dad's Laptop, by the way, is a little Acer with a line out (separate from a headphone jack) running Windows XP. The only software you need is Winamp and BUTT, both of which are free. You'll also require two streams... not so free.

1. Pick up the first (Musician A's) stream using Winamp.
2. Send the stream to a Xenyx 800 mixer (because we use a condenser mic that requires phantom power) via a stereo cable (and jack adapter, if required) from the line out port.
3. Play your instrument/voice over the stream while using the “control room” headphones to monitor the incoming stream.
4. Send this new mix (not yet a stream) to the computer via a Behringer Audio Interface plugged into a USB port coming off the tape out for the control room so what you hear is what you get.
5. Using BUTT, set the input to the program from the Audio Interface and then send it out as a second stream. (BUTT allows for Icecast or Shoutcast streaming and is used by literally ever musician I've talked to about streaming in SL.)

As I understand it, the same stream “passing” can be accomplished with the usual guitar/mic audio interface boxes used for digital recording, but every time I tried to get information about how to go about it from a salesperson they said “You're trying to what? What's a stream?”. So, after working this out with Montian, I went and bought everything at Musician's Friend online and ignored what music store and FX guys said. If you had a fully customized audio or studio computer with multiple line in/out jacks you could probably do this easier, so long as you could get your soundcard to split the streams and directions or bypass the card with at least one of the streams.

Which hits on one of only two really difficult things about this... computers and their default setups... and the stream lag matched with the fact that Musician A never hears the mix (!!).

It's very difficult to get some computers to allow two streams of music going in different directions. BUTT helps in that it manually chooses the input it will read to send out as the second stream, but even then things can go wrong. There's a work around called a VAC, a virtual audio cord/cable, which is a little software program that will act like an audio cable internal to the computer to “route” the sound where you want it to go..from programs to mixers, etc.

They're notoriously a pain, however, so it's best if you can find a hardware set up that works. We've reversed the order (putting the audio interface BEFORE the mixer, for example, and then doing a line in from the mixer) and a bunch of other things to get a working set up. You just have to play with it. All in all, it wasn't too expensive to set up and if you're already streaming and a techno musician, you should have everything you need except maybe an audio interface or the BUTT program.

As to lag, there are several pairs of musicians in SL who manage to make this sound like they're in the room together. Max Kleene has been doing this for ages and has several people he streams with who can do this. Harper Messmer too. The trick is to have a savvy Musician A who can leave a little space for Musician B to talk - a few jokes, etc set up ahead of time - and then have a sharp musician B who can make use of those spaces and also read cues (a light strum, or paper shuffling, whatever) for when to stop talking because the first guy is going to start singing/playing again. This does also necessitate that Musician A is laying down the background for the track, so he/she tends to be guitar/piano with musician B being rhythm/harmony/over the first instrument (violin, mandolin, slide, etc).

You can also chain stream with as many as five streams connected up in this way, but by that point the stream quality degrades to the point it's useless and the lag makes it impossible to be cohesive as a group, with Musician A leaving the stage as much as twenty minutes before the last musician.! LOL