

Though most people know of unofficial live show recording in reference to the Grateful Dead and Phish, it's been around for a really long time, and just about anyone who can be recorded has been. Dean Benedetti famously recorded 4 hours of Charlie Parker solos in March of 1947, and I've seen concert recordings of everyone from Joan Jett to Peter Brotzmann to Britney Spears. Phish and the Dead have such cultural prominence and such huge fanbases that just by existing as they are, they have brought the niche world of tape trading out in public. But they are just the tip of the **Slide 1** iceberg.

My own personal entrée into the tape trading world started exactly that way, with Phish and the Dead. I copied whatever tapes I could get from people I knew in high school who'd only gotten ahold of one or two shows themselves. No lists, no lineage, no idea of what was out there. No clue if I was getting a legendary show, a run of the mill performance, or a terrible night.

Stage two was seeing this **Slide 2** Pink Floyd bootleg, which I paid \$45 for and still have. That was when I found out people recorded bands besides Phish and the Dead. **Slide 3** Bootleg albums, vinyl, CD, cassette, or otherwise, were seldom recorded by someone with the plan to sell them. Usually instead, the bootlegger got ahold of someone's recording, pressed it, and sold it, a practice that continues to this day, and probably always will. But, how did those recordings spread to begin with? They went around through the oldest communication method, person to person. Aficionados met each other at concerts, in record stores, through friends of friends. Again we look to the Grateful Dead for the largest and most organized example of this phenomenon. Tape trading clubs started, then **Slide 4** *Dead Relix*, now *Relix*, gave traders a nationwide forum. Still though, trading was a slow, analog process. Then, we got the internet and everything was upended.

It's important to understand how much and how quickly the internet changed everything about tape trading. As a comparison, recall the dizzying speed at which we blazed through tech developments for increased storage and corresponding practical file sizes in the late 1990s through the early aughts: **Slide 5** CD-ROMs to CDRs to zip drives to 1 or 3 gig hard drives to hard drives measured in the tens of gigs. It was that level of transformation.

It was a social upheaval intertwined with a technical one. Tapes degrade in quality as the generations increase. In the world of audiotape trading, getting a low gen copy usually necessitated active networking. Every time you copied a tape the quality degraded. **Slide 6** That meant that the best quality you could get, short of having someone give you their master recording, was a first gen. And that, in turn, required the one person who had the master to make every first gen themselves. Tapes took as long to copy as they did to play, so it was a time consuming endeavor. Even making a whole bunch of first gen copies at once, linking one tape deck to many, required the physical presence of persons and decks and took the full playing time. Audio quality necessitated a personal connection and living in the right place. Even acquiring a low gen tape by mail, by the use of a **Slide 7** vine or tree structure—a master given to some people to make 1<sup>st</sup> gen copies of, those people making 2<sup>nd</sup> gens, etc.—required being in that vine, which again meant knowing the right people. Audio quality was inextricably intertwined with social status.

The internet did not initially affect that relationship. In the early dial up days with hard drives measured in the hundreds of megs, no one was transferring anything larger than a photograph online. But you could post a tape list online where anyone could see it, and this had a transformative effect: it was no longer necessary to physically meet people or subscribe to a particular publication. Also, lower profile artists became more visible. I started tape trading in

earnest in the fall of 1997, and found from internet lists that people were taping and trading artists I'd never even thought there might be recordings of. Santana, Mahavishnu Orchestra, Tom Waits, the list went on. The smaller the artist, or even the smaller the artist's vocal fanbase, the less chance you had of encountering the tapes. But on the internet, all you need for everyone to be able to see something is for one person to care.

It's important to remember though, that there was no guaranteed access to the tapes on those lists. Plenty of collectors wouldn't trade to anyone who couldn't offer them something they didn't have, usually because they had spent years and much effort building their collection and couldn't be bothered helping newbies **Slide 8**. Those that would frequently did a blanks and postage deal. The exchange of money for tapes was anathema, but paying the return postage and giving the trader an amount of blank cassettes equal to the amount you were sending for the show itself—so that in a B & P deal for a two tape show, you would send 4 cassettes—was considered an acceptable way to balance the scales. Traders were likely to use thousands of cassettes in their lifetimes, and they cost, especially **Slide 9** Maxell XL-IIs, the trader's weapon of choice. However, they would soon become obsolete, a process that started even as online tape lists sent ever more of them flying around the planet.

In the late 1990s, CD burners weren't cheap—there wasn't one on the \$1700 computer I got for college in 1997—though they would be standard equipment only 3 or 4 years later. Because of that expense, CDR traders were a tiny minority at first, such that I didn't even consider the ramifications of the technology at the time. In retrospect, it was revolutionary. A CD trade meant that the show had been digitized, and a digitized show ceased degrading. Thirty years of the modern trading era counting multiple generations as a necessary evil, recordings degrading as they spread over the world—gone overnight. No matter how far down the chain

you were, your copy was an identical copy. **Slide 10** A digitized recording meant that everyone got the master, previously a literal impossibility. The commoners got to eat at the kings' table, and the table was set with the food of the gods.

Nor was that the end of the changes. By the early 2000s, hard drives had increased in size by orders of magnitude, as had internet speed. It was now practical to forego physical media altogether and just store lossless audio files, though the crawling speed **Slide 11** of the peer to peer sharing networks of the time meant distribution was only practical through a server/client relationship. But that still constituted both a technological and social seismic shift. This was the first live show distribution system in which you didn't have to know anyone. All you needed was an ftp client and a URL.

It might seem like finding a server would still require inside knowledge, but the process was thoroughly democratized, and the roots of that democratization go back to 1998 with the founding of **Slide 12** etree.org.

The nascent online trading scene of the late 1990s lacked a center. Enter etree. Etree started up in the summer of 1998, created by 10 people drawn from **Slide 13** Sugarmegs and People For a Clearer Phish, which were big deal show trading sites for, in a trend you may have noticed in this presentation, the Grateful Dead and Phish, respectively. A lot of **Slide 14** etree's front page concerns the mailing list for ftp server locations and links to free software. But the two items that actually make the largest impact are buried in the "About" section. **Slide 15** 1) mp3s are no good for live shows. They're lossy, we won't use them, use Shorten. Keep in mind that this was only a year or two after mp3s had really become available to the public, and were one of *the* hot things on the internet. **Slide 16** 2) physical trading is over, from now on, we download. At the time a CDR was still necessary as a final product, but only until hard drives

got larger. Those are the foundational principles of modern live show trading right there: lossless audio, and computer to computer transfer. They have only grown in relevance with the switch from servers to bittorrent sites, which have broadened access even further through true peer to peer sharing and all kinds of shows available at one site instead of being limited to whatever someone put on a given server.

The digital age brought another change: information. In the analog trading days, show and recording information degraded along with the sound quality as the number of generations away from the master increased, frequently ending up with nothing beyond the **Slide 17** track listing, date, and city. Conversely, digital got everyone whatever information was available, because it was entered once, then perfectly replicated. Etree values information, and their given structure for show components, like a lot of other things they did, propagated outwards, to the point that it has become standard for any show traded online anywhere: the audio files, md5 checksums, and an info file—preferably with everything from what kind of microphones were used to make the recording to where the taper was sitting, things fanatics had long cared about, mixing internet populism with the one voice can be broadcast far and wide principle—the resource of the masses given rules by the few obsessives.

Nor did it stop there. **Slide 18** Etree created naming standards for files and folders, and an ever growing set of band abbreviations. The naming standards grew with experience too, you can see how much they expanded from **Slide 19** basic to **Slide 20** extended, so that you can tell without even opening the folder what show and what source you've got. Of course, that only works if people all actually *use* it, which many don't, as you can see from **Slide 21** my Neil Young shows. That's one of the downsides to a folksonomy—you can't guarantee that people will follow it.

But it does have supervised usage in two places. One is another outgrowth of etree, **Slide 22** their database. Here, every source of every show is recorded, as well as all possible information, and assigned a unique identifying number. Like physical archives, numbers are assigned in order of acquisition. But since there's nothing physical to deal with, rearranging the shows into order by **Slide 23** any of their data points is easily done.

The other place etree's standards are followed to the letter is the **Slide 24** Live Music Archive. When the Internet Archive decided to get into hosting live concert recordings, they adopted etree's naming structure wholesale. Shows can mostly be uploaded by anyone, but **Slide 25** correct form is automatically instituted, ensuring that the file names really do function as they're supposed to in this case.

The fact that the LMA uses etree—the fact that there *is* an LMA—is a big part of the answer to the question: **Slide 26** why do we care about all this? And the answer is that concert recordings are a huge, major part of popular culture and music history. Jazz artists and jam bands improvise every show. Arrangements of old songs change. Bands like Pink Floyd, Radiohead, and Television counterpoint meticulous studio craft with a much rawer, more aggressive live performance, of which there is little or no official documentation. Banter with the audience. People in the audience talking near the taper. There's always *something* more to learn, and for some artists that forms a crucial part of their musical personality.

And yet, the official study of any of this is close to nil. The majority of the academy, or even music critics, have ignored it. It could be that there's enough officially released material to keep up with already, or enough to catch up on after decades of first jazz, then rock, then hip hop, and surely something else next, not being taken seriously as legitimate objects of study. But the fans never cared about legitimacy from the establishment. They taped the shows, they traded

the shows, and they classified and cataloged the shows. With etree's database at over 100,000 concerts and a gigantic repository using their cataloging standard, this is how it's going to be. Everyone else will have to follow their lead. Thank you.