

# The mosaic of the air

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[See the last poem on this page.]

The drive finally gives me no errors, and I can pull the delightful music encoded thereon, and it makes me happy. I can sit here in my cube, with earplugs under noise-cancelling headphones and some Beach Boys playing (Have I mentioned how great Pet Sounds is?), or maybe the Beta Band (from a song entitled 'Round the Bend: "I listened to the Beach Boys just a minute ago,/ Wild Honey,/ it's not the best album but it's still pretty good./ Got some funny little love songs on there./ But it's not mainly a Brian Wilson production so it's probably not as good as something like.../ Pet Sounds."'), and it's like I'm not even here.

I like listening to music from hard disks, even though it cost me hours of futzing the other day. Well worth it. You never, ever have to get up to change the record. Not having to change the record does have the disadvantage that you're more likely to tune the music out, what with no reminder every twenty minutes.

[Here's an apropos factoid: CDs are about 74 minutes because the people at Sony wanted to be able to put Beethoven's Ninth on one disc.]

The other wonderful thing about music from a hard drive is that there's no cover art. To many people, music is a fashion statement, and the cover art is therefore essential. And just think how many chanteuses base their singing career on their photogenicity. I have no objection to the music-as-fashion-statement people, and certainly am not gonna dictate how they should relate to an abstraction (music); but for me, the cover art is more often than not annoying. The band members look like idiots. The lyrics are always disappointing relative to what I thought they were saying. The liner notes (if any) never include figures. I've only discovered the delight that is goth music after hearing it from a hard drive, because ya don't notice the high quality of the music until you strip away the dreary cover art and excess eyeliner.

Did I ever tell you about the really wonderful trickery that went in to the MPEG 1, layer III standard? The problem was that one minute of music on a CD is 10MB of data, which is a whole lot. For comparison, this blog page (before this entry) is .036MB, equivalent to a fifth of a second of musical data. Now, the old standard for dealing with this sort of problem was lossless compression: you find all the redundancies in the data and eliminate them in a consistent manner, so you can reinsert them later and get exactly the same result. [A clarifying

example: if you were to replace all the `thes` in this blog with an `X`, you'd save two characters every time. This alone would make the blog 1.5% smaller.] But that didn't work so great with music, so better was invented.

[Part of the motivation for caring about the size of digital music, by the way, was the development of the Sony MiniDisk. Even though nobody bought one, its technology lives on.]

The brilliant new idea was that we humans can't perceive certain things about our music. If there's a loud A (a frequency of 440 cycles/second), and then there's something playing quietly off-key at 441 cycles/second, we humans can't hear the off-key instrument at all. It may as well not be there, as far as we're concerned. Then there are those high pitches that only dogs can hear—no point encoding those until dogs start buying music. There are other tricks, but I can't remember them right now. [The ever-observant Mr. PH of Seattle, WA pointed the author to this article which found zero difference in perception between a properly-encoded file and a CD. The person who was most able to find a difference had hearing damage (and therefore the psychoacoustic models used for encoding didn't quite describe him).]

Anyway, through such *trompe l'oreille* techniques, we can get that same 10MB of music on to 2MB and no human can tell the difference. I think that's neat. Computational algorithms based on human perception are one of the great advances of our time.

I've had a few readers, such as Ms. EB of Rockville, Maryland, comment that my blog here is rather impersonal, and I tend to expound and/or pontificate on dumb stuff like psychoacoustics instead of talking about my deepest emotions. But the MPEG 1, layer III encoding and compression standard has had a profound effect on my well-being and general emotional state. For example, I would not be able to deal with sitting in this cubicle without it. In 1999, before the standard became as well-known as it is now, I had to bring CDs to my cubicle, and I simply could not bring enough CDs in to make the stay tolerable—and that cube even had a window.

Visual just doesn't have as much impact on me as aural. Maybe that's just my own fashion statement, or the music my mother played for me in the crib or the erratic mappings of my brain, but that's just how it is for me. As such, the general buzz of traffic, air conditioners, and those annoying people everywhere is just unbearable. This is one way in which I feel like an oppressed minority: people care much more about visual aesthetics over aural, and so things like leafblowers are somehow OK. And so, I care deeply about having some sort of order to the airwaves pressing against my head. Rummaging through my closet yesterday, I found that I have five pairs of headphones—I think I'd wear them all at once if I could find a way.