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Augmented Object

I was trying to think about objects that I always have on or around me and what hasn't been augmented. Glasses? AR. Shoes? Work has been done in Joe P.'s group. Wallet? RFID debit from cell phone. Wall? Every ubi-comp project. But how about earrings? Earrings are interesting, especially because there isn't any (practical) limit to their size and design. Typical gender roles create restrictions for men in America, but I think the tech factor can definitely change that. What's nice about earrings is that they're right next to the ear... close enough that perhaps by using the right material, attachment, and method of vibrating we could have it transmit sound to our ear. I don't know if its possible, but ideally it would be subtle enough that people around us couldn't hear it but since it's on our ear we could hear it.

Add a microphone, wireless connection (Bluetooth, wifi, radio, etc, or even IR), and an IC and many things could happen. It could be an audio loop (recording buffer) that allows us to listen to people's names in case we forget (perhaps we have a controller built into our clothing, part of a ring/accessible jewelry, belt, or in our hand so accessing the data is discrete). Or it could be part of a larger system taking in voice input. There has been work (including David Merrill) using eye glasses as an IR guide/sensor, but why not put it on an earring? This would be particularly useful for people like me who has an earring but does not wear glasses. With the proper wireless device, it could also be used as a geo-location beacon. Voice input might tell it when to allow presence-broadcasting or not. Or turning a ring so that it has some particular orientation could switch between the two (ring is obviously networked with earring). Hook it up to my cell phone, and it could announce (ideally to only me) the incoming caller. With the microphone it becomes a hands-free headset.

It also could be used to listen to the environment passively and detect when I am talking to someone. Having a vibration sensor might detect high-frequency vibrations (my speech) and understand turn taking. This might be a cue for a context-aware application to know when not to disturb me, or when to take notes. Or by knowing when I'm asleep, it could alert me when it hears something suspicious (such as glass breaking) occurs or be used as an alarm clock. Add an accelerometer and it knows when I get out of bed or when I fall back asleep. Or sit or walk without requiring geo-location. Or detect a lot of movement (with the proper context such as volume level, geo-location, and time) and it might know when I'm dancing. When I'm dancing a lot, it could potentially record the music for me for later listening.