THE END USER

Taking sound to a new level

By Victoria Shannon   Published: March 19, 2008

PARIS: The music of my teenage years came to me mostly via AM radio. When I listen to music now, it is delivered in digital format over headphones. Compared to the tinny, static-filled radio of my youth, how could I ever want better sound than that?

It may be surprising to hear, but experts are already working on the next generation of audio. In start-up companies and research labs around the world, the reproduction of music is undergoing a fundamental transformation.

In a lab outside of Paris, for instance, researchers are working on how to recreate accurately what sound engineers intended when they were in the studio mixing musical recordings.

But the goal of the project is to reproduce that fidelity over the kinds of simple headphones that we carry around with us, not over the thousands of euros' worth of equalizers and speakers necessary in a home stereo or cinema setup.

Brian F.G. Katz, a researcher at the Centre National de la Recherche Scientifique, said his work was based on the principle that our perception of sound is individual, determined by the size and shape of our ears and skulls - a difference lost on today's headphones.

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He is working with a Paris-based company, Arkamys, on a three-year effort to bring three-dimensional sound to ear buds. It is something that Arkamys is pitching as "listening with your own ears" - as opposed to listening to music over headphones that are best suited to someone else's ears.

In a commercial sense, the idea would work like this: You use your mobile phone to take several photos of the side of your head and your ears. You send the photos over the cell network to a service that analyzes them against a collection of three-dimensional images of ears.

The service matches your ears to the closest model, and then sends back to your phone customized software that changes the music you listen to in such a way that it accurately recreates the artists' intention.