

Tech[nology]News:

Smartpen sharpens focus on digital academic aids

By Michael Erie
TECHNEWS WRITER

The Livescribe Echo smartpen is a product that records audio as well as written notes that you can sync up with any computer which has a basic program available from the company's website. I learned about the Echo about half a year ago, and the idea of being able to connect my notes from classes with the actual lecture was so appealing that I quickly purchased the 2GB pen online for \$99.95. Two other models of the echo are available with the most expensive being the 8 GB model selling for \$199.95.

The physical construction of the pen is fairly solid - mine took and survived quite a beating, including being stepped on, on more than one occasion. One problem with the construction is after a few small impacts the case where the micro-USB port and audio jack are located becomes loose. Also, the case of the pen is bulky, coming in around half of an inch in width at the thinnest and six inches long, making handling the pen far more awkward than a simple ballpoint pen. The pen tips are standard ballpoint tips that are easily replaced when the ink runs out. The pen has an OLED screen which displays the time and allows the user to navigate through menus and applications. Under the pen tip is a high-speed infrared camera that utilizes Livescribe's unique paper to record what is being written, and the pen has a mono recording microphone which allows the recording of audio. The paper is provided in many sizes and forms and can be ordered with the pen or by itself.

The program that transfers your notes and documents to the computer is called

"Livescribe Connect." The interface of this program differs based on operating system but the basic navigation is the same. There are three tabs to utilize: pages, audio, and applications. Through these tabs audio can be played back from the pen, or saved on the computer with the document so that the audio can be played via highlighting words in the corresponding document. By archiving documents and audio on the computer, they can be deleted from the pen, freeing up space. Livescribe has created a forum in which these files, called Pencasts, can be uploaded and shared. Other programs, like Evernote, can also utilize Pencasts and are easy to set up.

The pen operates wonderfully in most cases. When writing commands, then pen can have some issues with understanding the words written which is compounded by my poorer hand-writing. Audio recordings from lectures in small class rooms around campus are easy to listen to, even if I am sitting in the back of the room. The ability to play audio starting from a point in a document is a great feature for cutting down time searching through the IITOnline video for that section in the class. However, there is a problem which comes with recording audio in large rooms. After attending the first President/Provost open forum last semester, I noticed that the recording sounded thin, which I can only attribute to the size of the room.

There are many useful applications for the pen, like a unit converter or table maker. However, these applications come at an extra cost. These applications do have some flaws, though, and can be difficult to work with. Basic applications, like Connect, allow users to output files to a different location than just the Livescribe Connect Program. It also allows pages to be clumped together in PDF booklets



Image courtesy of chipchick.com

so copies of homework can be readily available for review, or thoughts that jump between pages of class work can be bundled together.

Livescribe support is absolutely awesome. There are many videos and guides on how to use the many functions on the Livescribe website, livescribe.com. There is also a large troubleshooting section due to the many issues which have arisen with the pen, and if the troubleshooters are not enough to fix any problems, the friendly customer service and willingness to replace a malfunctioning pen is astounding. When my first pen broke after

dropping my messenger bag filled with books and a laptop on it, the pen was replaced free of charge.

Over all, the Echo smartpen pen is great for people who like to listen to lectures while reviewing their notes, or cannot write fast enough to keep up with presenters. It shines with people who like to think aloud while working, and has a large potential of use for professors in lectures when used with the Elmo projection systems for lecturing. If you are interested in any of the functionality this pen brings I highly suggest investing in one.

Tech[nology]News:

Shocking!: Electric tattoos

By Pranava Teja Surukuchi
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Tattoos are awesome, until they aren't. Wait until Electronic skin is available commercially though, this new technology is a stretchable ultra-thin device that clings to the skin. The device includes sensors for temperature, strain, and electric signals from the body. This is a new kind of wearable technology prototyped by John A. Rogers, a Materials Scientist and his team at University of Illinois at Urbana-Champaign.

Depending upon the functional requirement of the device, it can be placed at several locations on the skin. One the wrist, it can measure blood flow and muscle movement. On the forehead, it can record brainwaves, and when placed on the throat, it can function as a secret phone to record the signals by simply deciphering movements of the voice box.

The device was mounted on a person's throat and the electrical measurements are used to control the cursor on the screen, demonstrating the device's

potential as a Human-Computer interface.

Electronic skin was designed to be flexible and stretchable, so that it can cling on to the skin and still be able to function normally. To achieve this, Rogers made use of high performance materials like silicon and fabricated them into thin "serpent like shapes" which helps it to flex and stretch as much as human skin.

There are several potential uses of the electronic tattoos. It can be used as a non-invasive diagnosis for patients with health conditions like sleep apnea or heart arrhythmia. It can also be used for monitoring the heart activity of premature babies. Rogers believes that the immediate use of the device is in bio-integrated technology and adds that the ultimate goal is to create tiny devices that may even be able to operate independently within the body, improving, for example, the health of the human heart.

The possibilities of such a device are. From monitoring the heart rate of premature babies to using it as a console in gaming industry to transmitting data by secret agents, it can completely revolutionize the world around us. it can completely revolutionize the world around us.



Photos courtesy of John A. Rogers

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