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Data Can Now Be Stored on Paper

arab news

By M. A. Siraj

November 18, 2006 (Arab News) – Is it time to say goodbye to CDs, DVDs, Zip drives?

A Kerala student has developed a technique for portable data whereby the data can now be stored on ordinary paper. And to boot, larger amounts of data can be had on lesser space.

The immediate question that pops into the mind is how to retrieve the data. Will it be as easy as feeding a floppy disc or CD into the drive and having it on the monitor? Perhaps it will be much easier than that. The piece of paper or even plastic sheet storing the data has only to be scanned in the scanner and read over the monitor. So wait, scan drive would be part of your computer.

Named “Rainbow Technology”, the new technique is the brainchild of Sainul Abideen, who has just finished his MCA at Muslim Educational Society Engineering College in Kuttipuram in Kerala’s Malappuram district.

The extremely low-cost technology will drastically reduce the cost of storage and provide for high-speed storage as well. Files in any format such as movie files, songs, images and text can be stored using this technology.

Currently, of the several options available for data storage, DVDs are the best mode. But a high quality DVD, which is very expensive can store only about 4.7 gigabyte (GB) of data. In contrast, the Rainbow Versatile Disc (RVD) can store 90 to 450 GB. And Sainul has simultaneously developed a scanning drive based on his Rainbow software which will come in smaller sizes to be initially carried with the laptops and later to fit into their bodies.

Sainul says a CD or DVD consumes 16 grams of polycarbonate, a petroleum by-product. While a CD costs Rs.15 (SR1.25), his paper or plastic-made RVD will cost just about Rs.1.50 and has 131 times more storage capacity.

Sainul, who has just turned 24, says that instead of using zeroes and ones for computing, he used geometric shapes such as circles, squares and triangles for computing which combine with various colors and preserve the data in images. An RVD therefore looks like a printout of modern art.

He says all kinds of data has to be first converted into a common format called “Rainbow Format.”

In a demo at his college laboratory, this writer could see text typed on 432 pages of foolscap paper being stored in a four square inch paper. The writer was even shown a 45-second video clip of a Malayalam film stored on an ordinary paper. Sainul was guided by Prof. Hyderali, head of the MCA Department at the College in all these projects.

Sainul says the biggest advantage of the new technology will be the biodegradable nature of his storage devices which will do away with e-waste pollution.

He says with the popularity of his Rainbow Technology, computer or fashion magazines in future need not carry CDs in a pack.

The computable data printed on a paper can be attached in a tearable sheet and will be capable of carrying even software programs, or movies, MP3 data or text. Sainul is promoting the theme of disposable storage and says newspapers, magazines and video albums could benefit from the idea and also distribute their material in this form in order to curtail use of paper and facilitate the disposal of the waste.

Sainul is simultaneously molding the technology into "Rainbow Cards" which will be of SIM card size and store 5 GB of data equivalent to three films of DVD quality. Sainul says as "Rainbow Cards" will become popular, Rainbow Card Readers will replace CD drives of mobile phone and computer notebooks and will enable more data in portable forms for mini digital readers.

Large-scale manufacture of the Rainbow card will bring down its cost to only 50 paise (half a rupee). He is currently in consultation with a UK-based company for manufacture of the Rainbow Cards.

Sainul has also put forward the idea of databank with Rainbow Technology, which will enable huge servers with a high storage capacity.

Quoting a research study carried out in the US in 2003, he says the entire static data in the US would require \$5 billion (Indian Rupees 230 billion) for storage with the current storage devices. But Rainbow based databank could reduce the cost to Rs.3.5 million. He says he could construct databank with almost 123.60 Peta Byte (PB) capacity.

Sainul is also working on project Xpressa, a software package for regional languages. This will enable the Internet browser to access the newspapers available on Internet through mobile phone in audible form.

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