By Adrian Botezatu, Hardware Editor

New Switch Technology Brings 150,000 Times More Music to Your iPod

The researchers managed to stuff 1 billion transistors on a tiny piece of gold substrate

Researchers at the Glasgow University unveiled a revolutionary switch technology that will bring a significant increase in the memory capacity for consumer electronics devices such as the extremely popular iPod media player. The new switches are molecule-sized pieces that boost data storage up to 150,000 times without having to increase the surface of storage media. The group of researchers exemplified their discovery by naming the popular iPod player that now can hold as much as 40,000 songs. Such a device equipped with the nano-scale technology could bring users millions of media files right into their pockets. The research was conducted by professor Lee Cronin and Dr Malcolm Kadodwala, two scientists with the university's chemistry department. According to their statements, their project could offer as much as 500,000 gigabytes on the same silicon surface as the one used in nowadays' microchips. The density increase is possible thanks to the microscopic switches built of two molecular clusters situated at distances of 0.32 nanometers."What we have done is find a way to potentially increase the data storage capabilities in a radical way," said Cronin. "This is unprecedented and provides a route to produce new a molecule-based switch that can be easily manipulated using an electric field," he continued.Moreover, researchers claimed that they could achieve about 1 billion transistors on a single microchip by placing these switches on a gold or carbon surface. These transistors are in fact tiny switches that store bits of information as 1 or 0 values. When the switch is activated, the returned value is 1, and the other way around.The achieved transistors can be used for other applications, including DVD players, camcorders, USB drives and other storage-related consumer electronics devices."The fact these switches work on carbon means that they could be embedded in plastic chips so silicon is not needed and the system becomes much more flexible both physically and technologically," explained professor Cronin.