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THURSDAY, JAN 24, 2013

SCIENCE

You Can Squeeze 2.2 Petabytes of Data Into One Gram of DNA

THE GADGET GUIDE

Jamie Condliffe

Scientists from the European Bioinformatics Institute have managed to squeeze 2.2 petabytes of data into a single gram of synthetic DNA, and now they've achieved something truly amazing: they can store 2.2 petabytes of information in a single gram of DNA with 100 per cent accuracy.

The researchers have encoded an MP3 of Beethoven's 9th symphony along with all 154 of Shakespeare's sonnets, into a string of DNA. Scaled up, that represents a storage density of 2.2 petabytes per gram. What's more, they've managed to achieve that whilst also implementing error correction in the complex chains of molecules, allowing them to retrieve content with 100 per cent accuracy.

The technique uses the four bases of DNA—adenine, thymine, guanine and cytosine—to achieve the high information density. It is, understandably, still incredibly expensive: creating synthetic DNA and then sequencing it to read off the data is getting far easier, but it's still a time- and cash-consuming business. Keep hold of your hard drives for now, as this could represent a viable storage solution in the future. [Nature via New Scientist]

Image by Tacu Alexei/Shutterstock

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you've got 4 base pair to work with, then why would you limit yourself to binary coding? This is revolutionary computing, not because of storage density like these imagination-less scientists for it because this could finally break computer science free of its hamstrung object oriented computing model and finally lead to a probabilistic subjective oriented encoding trianry computing model. It would be a very cool and scary future. With binary you get on-off gates. With trinary you might be able to get on-off-maybe gates.



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Ill be right with you, I just have to feed my computer."

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w'd they get the rights to use the dream speech? I mean, people try to put it up on youtube and it's taken down for "copyright" issues (bullshit).



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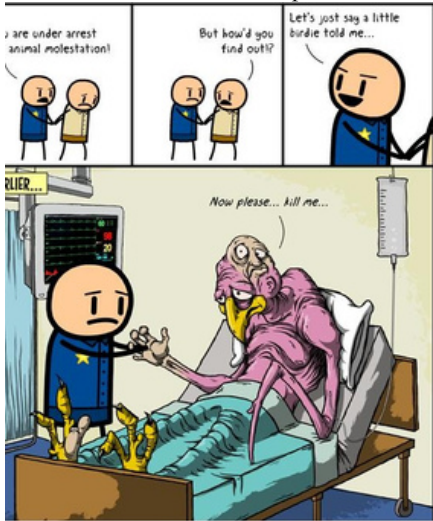
How many grams of DNA are in my body? What type of RAID arrays do you think I could use to store it?



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Does this mean hackers and scriptkiddies will have to graduate to using rhinoviruses?



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Hello, Microsoft Helpdesk? Yes, I've saved my Word document into the new DNA format on my hard drive, but then it gave birth to these horrible tiny demons from hell, with tiny horns and wings. How do I get rid of all of them? Do you think my computer got a virus?"



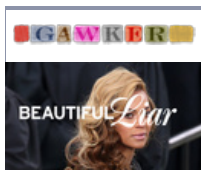
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JA has nice error correction, once it's read it'll check its self



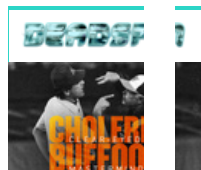
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