

# Coming soon(ish): DNA-powered hard drives

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If you're a typical technology user, you've run out of space to store your data at least once in your life, if not once this year already. Whether it's photos on our phones or Game of Thrones on our laptops, we're all gathering data faster than we can find places to store it. But we may have a long-term solution: DNA.

Yes, that's right: technology firms are experimenting with using synthetic DNA to store data. [Microsoft recently announced](#) that it is buying 10m strands of "long oligonucleotides" - molecules of DNA created in the labs of Twist Bioscience, a biotech startup based in San Francisco.

This is less loopy than it sounds. Compared to other storage formats, like magnetic disks, DNA is incredibly information-dense. A team at Harvard managed to cram 700TB into a gram of DNA in 2012. Researchers at Microsoft estimate that the limit is around 1 exabyte per cubic millimetre. That's a billion gigabytes crammed into the space of a large grain of sand.

Another way to think about this: we could store every bit of data currently on the planet in a cubic metre of DNA - roughly the same size as a small refrigerator - and still have room to spare.

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