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DNA storage method could mean shift from files to phials

“I will show you fear in a handful of dust,” wrote T.S. Eliot. Nick Goldman and Ewan Birney of the European Bioinformatics Institute near Cambridge have shown us more than that in just a couple of specks. Their DNA storage system would make it possible to keep 100m hours of high-definition video in just a cup of synthetic DNA.

There is still a gulf between the scientists’ development, which would enable squillions of bytes of digital information to be kept safe for millennia, and a commercially viable facility that would allow wedding and other family videos to be passed down through many generations. Perhaps that is just as well.

Even so, their work opens the possibility that material currently stored on hard disks or on magnetic tape could be held in DNA form cheaply and without deterioration. Provided, that is, no one wants to look at it too often, since easy accessibility looks likely to be an issue for some years yet.

Of course, storing so much data in such small physical form carries its own risks. An ill-directed sneeze or one dropped test tube could be the equivalent of the destruction of the Library of Alexandria – unless precautionary copies have been made.

But anyone hoping that the advance will mark a step towards the painless ingestion of vast amounts of knowledge must think again. The synthetic DNA developed for storage would degrade if injected into a living organism. Revision for exams will still have its place.

Many people may be daunted by the prospect of a future in which all digital data can readily be kept. It is unappealing to think that no error or embarrassment will ever be lost in the mists of time, but will instead be around for eternity. Yet there is comfort in this thought: devising an index that would allow all the available information to be found and retrieved looks even more ambitious than developing the DNA that will facilitate such storage.

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