# NewScientist

search New Scientist    Go    Log in    My New Scientist

**Home**  News  In-Depth Articles  *Blogs*  Opinion  TV  Galleries  Topic Guides  Last Word  Subscribe  Dating    **Look for Science Jobs**

SPACE    TECH    ENVIRONMENT    HEALTH    LIFE    PHYSICS&MATH    SCIENCE IN SOCIETY    **Cookies & Privacy**
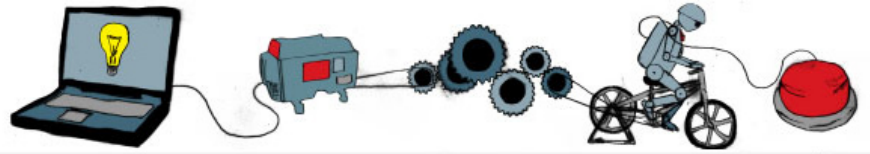
# One Per Cent
### Taking the sweat out of technology

# Powerful prose stored in error-free DNA

18:00 23 January 2013

*Douglas Heaven, reporter*

It is one of the most iconic speeches of all time, and now it has been immortalised in a very unusual way. A snippet of Martin Luther King's 1963 "I have a dream" speech has been stored in the alphabet of DNA.

Nick Goldman at the European Bioinformatics Institute in Hinxton, UK, and colleagues synthesised DNA to encode an eclectic mix of information in its adenine, thymine, cytosine and guanine components. They used these "letters" to record an audio file of 26 seconds of King's speech, all 154 of Shakespeare's sonnets, a digital photo of their laboratory and the famous paper in which James Watson and Francis Crick first described the double-helical structure of DNA.

The team built on previous DNA-encoding techniques by adding error correction, allowing content to be retrieved with 100 per cent accuracy.

DNA-based memory is sought after because DNA can last for thousands of years without special storage, other than being somewhere cold, dark and dry. In theory, DNA can encode roughly the capacity of 100 billion DVDs per gram of single-stranded DNA, making it potentially useful for storing the vast amounts of archived data produced by places such as CERN.

**Journal reference:**    *Nature* , doi:10.1038/nature11875

tags    **data    DNA    memory    storage**

Like what you see? Then you'll love the Technology section in New Scientist magazine.

READ NEW SCIENTIST MAGAZINE

SUBSCRIBE TODAY

Rise of the robot astronomers

# Post a comment

Sign in to comment, or comment anonymously.

Name

Email Address

URL

## Bookmark&share

Remember me? ☐

Comments (You may use HTML tags for style)

[ text area ]

Preview    Submit

## Previous post

## Next post

**Twitter updates**

### Recent entries

Powerful prose stored in error-free DNA

### Monthly archive

MIT website hacked in tribute to Aaron Swartz

Robot-assisted 3D printer aids march of the machines

Vibrating navigator shows cyclists the way

Bad grammar make good password, research say

## Tags

aircraft algorithm app Apple augmented reality car cars computer computing crowdsourcing cybercrime electric energy facebook gaming google Google GPS green machine green tech hack internet iphone microsoft military music online privacy robot security sensors smartphone social media software technology touchscreen Twitter twitter UAV video games

## About us

New Scientist
Syndication
Recruitment Advertising
Staff at New Scientist
Advertise
RBI Jobs

## User Help

Contact Us
FAQ / Help
Disclaimer
Ts & Cs
Cookies
Privacy Policy

## Subscriptions

Subscribe
Renew
Gift subscription
My account
Back issues
Customer Service

## Links

Site Map
Browse all articles
Magazine archive
NewScientistJobs
The LastWord
RSS Feeds
Online Store
Android App
Mobile site home

## Science Jobs

Biology Jobs
Chemistry Jobs
Clinical Jobs
Sales Jobs
Earth & Environment
Jobs
Engineering Jobs
Maths & IT Jobs
Graduate Jobs