



Researchers A-C-T on DNA Storage

Using a technique with multiple accuracy checks, researchers have stored large amounts of digital information on tiny volumes of synthetic DNA. Sophie Bushwick reports

Listen to this Podcast

[Download MP3](#)

Scientists have used synthetic DNA to store digital files—including a photo, Shakespeare's sonnets and an [audio recording of Martin Luther King](#). The work is published in the journal *Nature*. [Nick Goldman et al, [Towards practical, high-capacity, low-maintenance information storage in synthesized DNA](#)]

Unlike many forms of information storage, DNA is extremely long-lasting and does not require constant electrical power. Plus, it's tiny—a small cup of DNA can store one hundred million hours of high-quality video.

But until now, this storage method has faced too many obstacles: DNA synthesis is expensive and only works for short strings, and the decoding process creates lots of errors.

To avoid these problems, British researchers broke a long string of information into many overlapping short sequences, each tagged with its position in the overall sequence. American collaborators then synthesized short pieces of DNA to match the strings, and shipped the material overseas. Finally, researchers reconstructed the digital files with complete accuracy.

DNA storage is still very expensive. But the scientists predict advancing technology will lower prices and make their method cost-effective within a decade.

—Sophie Bushwick

[The above text is a transcript of this podcast.]

[Scientific American is part of the Nature Publishing Group.]

[Reprints and Permissions »](#)[Tweet](#) 9[1 Comments](#)[Add Comment](#)

More from Scientific American

[Latest News](#)[Most Read](#)

Follow Us:



See what we're tweeting about
[Scientific American Editors](#)



JenLucPiquant BBC News - Why did men stop wearing high heels?
<http://t.co/QnrwSiKF>
8 minutes ago · reply · retweet · favorite



BoraZ Facebook Graph Search pro and con
<https://t.co/6m9RPVSH>
19 minutes ago · reply · retweet · favorite



BoraZ Centroheliids: creatures of the sun
<http://t.co/7HDonPTx> by @PsiWavefunction at #SciAmBlogs
21 minutes ago · reply · retweet · favorite [More »](#)

Free Newsletters

Get the best from Scientific American in your inbox

Latest from SA Blog Network

Centroheliids: creatures of the sun

The Ocelloid | 25 minutes ago

Previous research in the Kermadec Trench

Expeditions | 2 hours ago

#SciAmBlogs Friday - Glassfrogs, Age of Miracles, bad smells, Rotifer in Motion, chemophobia, Geodesign and more.

STAFF The Network Central | 17 hours ago

The Startling Mechanical Beauty of a Rotifer in Motion

The Artful Amoeba | 20 hours ago

The Race to Catalog Living Species Before They Go Extinct

Observations | 23 hours ago

1. RSchmidt
11:51 AM 1/25/13

Cool, so when we create artificial life when can include make, model and serial number, as well as the users manual.

[Reply](#) | [Report Abuse](#) | [Link to this](#)

Add a Comment

You must [sign in](#) or [register](#) as a ScientificAmerican.com member to submit a comment. Click one of the buttons below to register using an existing Social Account.

News From Our Partners



Ice storm headed to Midwest overnight



Eurovision voting shows strain of economic crisis



Hordes Of Microscopic Submarines Could Suck Up Oil After Spills



NASA Joins European Dark Energy Mission



New U.S. Secretary of State Argues Climate Change a Top Priority



Texting woman falls into canal: The movie

Science Jobs of the Week

Postdoctoral Researchers (2), School of Chemistry
NUI Galway

Laboratory Technician Job
Georgia State University

Post Doctoral and PhD Fellowships in Marine Ecology
Technical University of Denmark, Centre for Ocean Life (www.OceanLifeCentre.dk)

[More jobs from Naturejobs.com >>](#)

YES! Send me a free issue of Scientific American with no obligation to continue the subscription. If I like it, I will be billed for the one-year subscription.



Email Address

Name

Scientific American is a trademark of Scientific American, Inc., used with permission

© 2013 Scientific American, a Division of Nature America, Inc.

All Rights Reserved.

[Advertise](#)

[Special Ad Sections](#)

[Science Jobs](#)

[Partner Network](#)

[International Editions](#)

[Travel](#)

[About Scientific American](#)

[Press Room](#)

[Site Map](#)

[Terms of Use](#)

[Privacy Policy](#)

[Use of Cookies](#)

[Subscribe](#)

[Renew Your Subscription](#)

[Buy Back Issues](#)

[Products & Services](#)

[Subscriber Customer Service](#)

[Contact Us](#)