

File 6 p. 72 • Forced to share results

The Golden State Killer terrorized California in the 1970s and 1980s, [...] but the case went cold until a genealogy website allowed investigators to match crime scene DNA to what seemed to be a member of the killer's family, eventually leading them to [him]. It turned out that the site authorities had relied on most heavily was GEDmatch, which, unlike other sites like 23andMe, is open source, meaning police could access genetic records without approaching the company for permission. [...]

This isn't the first criminal case in which ancestry DNA testing has been used. In 2015, after DNA evidence exonerated¹ an innocent suspect in a 1998 murder, police in Idaho Falls combed² the records of Ancestry.com for close matches to DNA at the crime scene, landing on a man who matched 34 of 35 genetic markers on the Y-chromosome that belonged to the killer. That led police to his son, but a DNA test eventually cleared his name. Still, if investigators in that case had used a DNA test that looked at a smaller number of genetic markers, which some crime labs do, the man might have wound up³ matching the DNA even though he was innocent.

gizmodo.com, January 2018

1. free from an accusation

2. analyse

3. end up

File 6 p. 73 • Intelligence DNA data storage system

As US intelligence services struggle to store the trove¹ of data collected during their snooping² operations, a team of researchers are developing radical new storage technology based on an unusual model—human DNA.

The Molecular Information Storage program, run by the rather protractedly named³ Intelligence Advanced Research Projects Activity (IARPA), is recruiting scientists to help develop a system for storing huge amounts of data on “sequence-controlled polymer”: molecules with a similar makeup and structure to DNA.

The technology has huge potential as researchers believe DNA-like polymer technology can store data more than 100,000 times more efficiently than current methods. [...] To give you an idea of the scale: one exabyte is four million times the storage capacity of a 256GB iPhone X.

The issue of how to store data is a live⁴ one for the world’s intelligence services. Costly data centers take up huge amounts of land, an unsustainable situation given the increasing amount of data generated by each person on a daily basis. [...]

Some data centers are even housed in urban locations. The Lakeside Technology Center in Chicago is the largest data storage facility in the US, spanning 1.1 million square feet, an entire city block. The center was transformed in 1999 and now holds more than 50 generators whirring⁵ around the clock. The Chicago facility is only matched by the NSA’s \$1.5 billion Bumblehive data center in Bluffdale, Utah, which is just over 1 million square feet.

Ultimately, the IARPA aims to scale down an exabyte storage facility so that it can fit in one room and run for less than \$1 million per year.

rt.com, 13 June, 2018

1. collection

2. spying

3. *nom à rallonge*

4. burning

5. functioning