

The story behind the looming \$30-billion-a-year synthetic DNA data storage market

[Emily] Leproust is cofounder and CEO of Twist Bioscience, a five-year-old startup that is, by some estimates, the world's largest supplier of manufactured DNA strands, or synthetic genes. Custom-ordered genes are the raw material of synthetic biology and the starting point of every biotech drug, food, or fragrance. The DNA in the capsule represents a new market—potentially a huge one—for storage drives made out of DNA.

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Encased in glass, [Twist's new technology] resembles an ink-jet printer hacked together, with exposed circuit boards and nozzles aimed at postcard-size wafer of black silicon. As the machine kicked into life, little tanks squeezed droplets of adenine, cytosine, guanine, thymine—the A, C, G, and T of DNA—into 9,600 nano-wells, each the width of a strand of hair.

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That's where the \$30-billion-a-year data storage market comes in. The research group IDC predicts the world will be creating 163 zettabytes of digital data by 2025, enough to cause “memory full” warnings on 1.2 trillion iPhones.

Instead of archiving that data on magnetic tapes, it may be possible to encode it in DNA—each bit translated into genes, to be sequenced when the data needs to be retrieved.

...Theoretically, all the data in existence could fit in the bland conference room where Leproust was showing me the silver pill. “For archival data you want to store for a long time, there's nothing better,” says Luis Ceze, a computer scientist at the University of Washington.

Read full, original post: [This company can encode your favorite song in DNA—for \\$100,000](#)