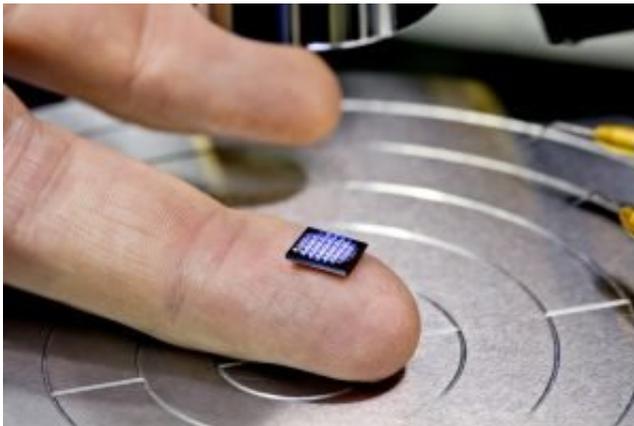


# IBM talks about world's smallest computer smaller than grain of salt

March 21 2018, by Nancy Owano

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World's best. World's fastest. World's smartest. Superlatives are the stuff of which news headlines are made. IBM, taking center stage at its Think 2018 conference in Las Vegas, scores big in superlatives this week in unveiling the world's smallest computer.

How small? Paul Lilly in *HotHardware* said it was a [computer](#) so small that you need a microscope to get a good look at it.

Measurement? 1mm by 1mm. Processing power? [Joe](#) Sommerlad, *The Independent*, said it was the same as the x86 chip that ran early IBM desktop computers.

IBM Research said "It packs several hundred thousand transistors into a footprint barely visible to the human eye."

The key point being made about its use is that it can be an anti-fraud device.

Is fraud that big a problem?

IBM presented its case. "Fraud costs the global economy more than \$600 billion a year. And in some countries, nearly 70 percent of certain life-saving drugs are counterfeit. Complex supply chains—comprised of dozens of suppliers in multiple countries—make it difficult to prevent bad actors from tampering with everything from paper currency to consumer electronics."

So how does this tiny computer help? IBM's Arvind Krishna, the head of IBM Research, wrote Monday: "Nobody likes knockoffs. Crypto-anchors and [blockchain](#) will unite against [counterfeiters](#)."

Krishna brought [blockchain technology](#) and the grain of salt sized computer into that perspective.

"Within the next five years, cryptographic anchors—such as ink dots or tiny computers smaller than a grain of salt—will be embedded in everyday objects and devices. They'll be used in tandem with blockchain's distributed ledger technology to ensure an object's authenticity from its point of origin to when it reaches the hands of the customer. These technologies pave the way for new solutions that tackle food safety, authenticity of manufactured components, genetically modified products, identification of counterfeit objects and provenance of luxury goods."

Wait, what is with the use of the word "blockchain?" What's a corporate

giant like IBM doing hanging out with blockchain? Paul Lilly in *HotHardware* even called the computer a "blockchain system." Lilly said IBM sees its tiny PCs being used as a [data](#) source for blockchain applications.

No need for surprise. Lilly noted that, "Beyond the 'get-rich-quick' (or slow) mentality of mining cryptocurrencies, the underlying blockchain technology is really what's [useful](#)."

Ensuring the authenticity of physical goods, said IBM, further involves crypto-anchors as tamper-proof digital fingerprints, embedded into products, or parts of products, and linked to the blockchain. When tied to a blockchain, they represent "a powerful means of proving a product's authenticity."

Olga Kharif in Bloomberg in December said Blockchain is getting bigger at Big Blue.

"The blockchain enables companies doing business with each other to record transactions [securely](#)," said Kharif. "Its strength lies in its trustworthiness: It is difficult to reverse or change what's been recorded. The blockchain can also hold many more documents and data than traditional database storage, allowing for more nuanced insights and analysis."

What's next: According to IBM, "The first models could be made available to clients in the next 18 months. And within the next five years, advances in microfluidics, packaging platforms, cryptography, non-volatile memory, and design will take all of these systems from the lab to the marketplace."

Pricing?

The computer will cost less than [ten](#) cents to make—and "packs several hundred thousand transistors into a footprint barely visible to the [human eye](#)," said IBM.

**More information:** [www.ibm.com/blogs/research/2018-03-ibm-world-smallest-smaller-grain.html](http://www.ibm.com/blogs/research/2018-03-ibm-world-smallest-smaller-grain.html)

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