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Why Jeff Bezos's 10,000-Year Clock Project Is a Dream Decades in the Making

He's not the only visionary behind this wild idea.

By Alasdair Wilkins on February 20, 2018 Filed Under Design & Jeff Bezos

Amazon founder Jeff Bezos announced Tuesday that installation has begun on a giant clock intended to keep time for the next 10,000 years. Housed in a mountain in a remote part of the West Texas desert that Bezos owns, this clock is the next step in the realization of a decades-old dream both for the tech mogul and for its creator, supercomputer pioneer Danny Hillis.

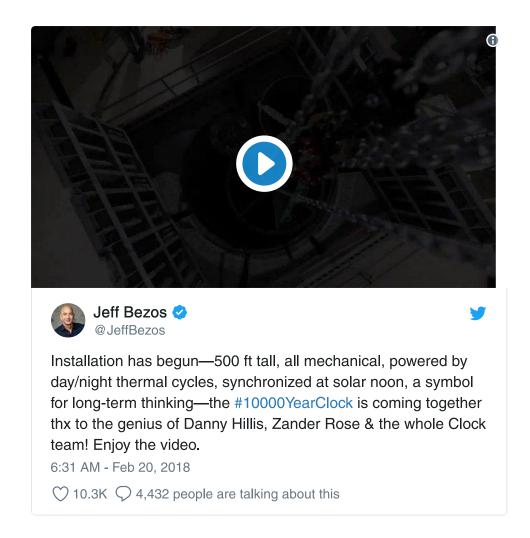
As Bezos revealed in <u>a tweet</u>, the finished clock will stand 500 feet high, be fully mechanical and solar-powered, and keep accurate time by synchronizing each day with solar noon. This clock isn't *technically* the Clock of the Long Now, the final version that will be built for the public atop Nevada's Mount Washington, but rather a full-scale prototype to ensure the actual clock really does tick along for 100 centuries.

Bezos discussed the clock at his AWS Fireside Chat in 2012, which you can watch in the <u>video</u> below. He pointed to the immense <u>engineering</u> challenges — including accounting for deviations in Earth's orbit over 10,000 years — that must be accounted for in the clock's construction, while also explaining its symbolic importance.

Read more from Inverse: <u>"At the Long Now's Interval Cafe, You Sip Coffee and Ponder the Year 10000"</u>

"If we think long-term — and when I say we, I mean we humans — if we think long-term, we can accomplish things we wouldn't otherwise accomplish," said Bezos in 2012. He pointed to the problem of world hunger, which would feel insoluble if asked to fix in five years but could be doable if given 100. "All we've done there is change the time horizon. We didn't change the challenge, we changed the time horizon."

The Amazon founder has contributed at least \$42 million to the construction of the clock, which he called "a symbol of long-term thinking" — something that's been a core tenet of Amazon since he founded it more than two decades ago.



"Our first shareholder letter, in 1997, was entitled, 'It's all about the long term," Bezos told *Wired* in a 2011 interview when asked about the clock. "If everything you do needs to work on a three-year time horizon, then you're competing against a lot of people. But if you're willing to invest on a seven-year time horizon, you're now competing against a fraction of those people, because very few companies are willing to do that. Just by lengthening the time horizon, you can engage in endeavors that you could never otherwise pursue."

For Danny Hillis, the computing pioneer, the dream is still older. He first came up with the Clock of the Long Now in 1986, and Bezos isn't its only high-profile advocate. Musical pioneer Brian Eno has <u>worked on the clock's chimes</u> and <u>came up with the name</u>both for the clock and the Long Now Foundation that was founded in 1996 to support its creation and similar projects.

<u>Science fiction</u> author Neal Stephenson worked on the project for years and <u>incorporated</u> ideas from it into his book <u>Anathem</u>. Musician Peter Gabriel suggested the clock shouldn't be mechanical at all but instead be a kind of timekeeping garden, while the magician Teller suggested the best way to preserve the clock for 10,000 years would be to not build it at all,

staging an elaborate hoax of its construction so that its legend could live on far longer than a real thing likely could.

In interviews and elsewhere, Hillis has emphasized the unique challenges designing such a long-lived clock entail. Writing in *Wired* way back in 1995, he said all his friends saw a different potential hurdle the clock would have to clear to make it to the 121st century.

Read more from Inverse: "A New, Gorgeous Look at the 10,000 Year Clock With 'The Clock of the Long Now"

"My engineering friends worry about the power source: solar, water, nuclear, geothermal, diffusion, or tidal?" Hillis writes. "My entrepreneurial friends muse about how to make it financially self-sustaining. My writer friend, Stewart Brand, starts thinking about the organization that will take care of the clock. It's a Rorschach test - of time."

Generally, the biggest problems come back to people. Humanity might lose interest in the clock, its guardians might die out, or a civilization capable of understanding or appreciating it might collapse, rise, and collapse again. It's possible future generations will no longer count time in even remotely the same way that we do, making a traditional clock face meaningless.

"It actually doesn't show you the time when you go up to it," Hillis told NPR's *Morning Edition* in 2011. "It doesn't show you the time until you wind it. The clock face shows the positions of the planets and the moon and the stars so it's hopefully kind of a universal clock face that would make sense for somebody who doesn't use exactly the same timekeeping systems that we do."



As Hillis pointed out in his 1995 *Wired* article, the clock must thread a tricky needle in terms of its <u>design</u>: Not made of materials so precious that it be stripped for part if it becomes unimportant, yet also not so iconic that it becomes dangerous and has to be destroyed by its ideological opponents.

According to Hillis, the sweet spot is to be made of materials large and worthless, like the Great Pyramids and Stonehenge, or to become lost. The remote locations of both the West Texas

desert prototype and the Nevada mountaintop final clock give them a decent chance of the latter.

Then there are problems of human creation to consider. Take global warming and the melting of the polar ice caps.

"For me, it was very hard to relate to until it actually started influencing the design of the clock, because the clock, of course, has to keep time in days," Hollis told NPR in 2011. "But when the polar ice caps melt, the Earth actually starts spinning at a slightly different rate. And it turns out, over 10,000 years that really matters. And so, the mechanism of the clock actually had to take that into account and adjust it. So, for me, that made this kind of abstract concept of global warming much more real and serious."

The final clock has no scheduled completion date. It's already been 32 years since Hillis came up with it, 22 years since the Long Now Foundation began, and seven years since Bezos put a small fortune behind its completion. But then even the longest of those durations would only be a third of one percent of the clock's planned lifespan. It rather would defeat the whole purpose of the Clock of the Long Now — a testament to humanity's capacity for patience, resolve, and long-term thinking — if the clock were finished quickly.

Doesn't mean the fact it's now a step closer to being real isn't any more exciting, of course.



Photos via Jeff Bezos/Twitter

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