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Amazon's Bezos funding giant, elaborate, 10,000-year clock inside mountain

The year is 12,011. Human civilization has advanced by unimaginable measures. Or perished. Or both. Perhaps humans are still living on Earth; perhaps they've colonized other planets. The 21st century is all but forgotten, a blip on the human calendar, looked upon by scholars as we today look at the cave paintings of our 10,000-year-old ancestors.

Yet, under a remote, limestone mountain in the desert of western Texas, lies a monument of time – a relic of a human civilization past. For 10,000 years it has been ticking, slowly turning, chiming an eerie melody as it records the passing of seconds, minutes, hours, days, months, years, decades, centuries, millennia.

It is an enormous clock, its gears mounted in a 500-foot-tall, 12-foot-wide vertical shaft in the rock. Many of its intricate titanium, steel, ceramic and stone parts move so slowly it would be nearly imperceptible during your lifetime. A huge, 10,000-pound weight hangs 200 feet down the shaft, powering the timepiece for up to 10,000 years without human assistance.

Once a year, the clock ticks. Once every 100 years, the century hand clicks ahead. On the millennium, a cuckoo comes out.

This is the vision of inventor Danny Hillis, industrial designer Alexander Rose, Amazon.com founder and CEO Jeff Bezos, and a team of dedicated scientists, machinists and futurists who have designed – and are currently building, they announced Friday – a 10,000 year clock in the middle of nowhere. For six years, teams in Seattle and California have been building working prototypes, giant gears, huge robots and ingenious gadgets for an enormous clock that will last the test of time.



A model of the 10,000 year clock. (Courtesy of Long Now)

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@mrsmoy Fun -- I'll keep that in mind!

@barbchamberlain @mrsmoy Me too! I'll be there opening night -- probably wearing some kind of Muppets T-shirt.

Categories

It's an ambitious project, to say the least. <u>Funded in part by Bezos</u> and managed by the San Francisco-based <u>Long Now Foundation</u>, the 10,000 year clock is being installed inside a mountain about a day's hike from the tiny town of Van Horn, Texas. And they've already purchased land for a second timepiece inside a mountain in eastern Nevada.

A distinguished inventor, Thinking Machines Corp. co-founder and former Disney imagineer, Hillis co-founded Long Now in 1996 and designed the 10,000 year clock to run with minimal maintenance and little human interaction. It's powered by sunlight – energy is harvested by a "thermal-difference device" – and by the occasional human hiker, who can wind up parts of the apparatus as they climb the 500-foot spiral staircase to the top of the mountain shaft.

At the top is a small, synthetic sapphire window cut into the mountain, and a complex mechanical display of dials, an <u>orrery</u> and calendars. With the assistance of a giant pendulum that takes 10 seconds to swing, the clock keeps perfect time – but only displays the current time when a visitor winds it

Ten chimes will be tuned to the chamber's acoustics and will sound at



The clock uses a number of materials, including titanium and ceramic, seen here in white. (Courtesy of Long Now)

noon whenever a visitor winds the enormous clock. Thanks to a complicated mechanical device programmed much like a computer, the chimes – whose sounds are, according to the project's website, composed by famed musician Brian Eno – will play a different melody every day for the next 10,000 years.

There is no completion date for construction; the project could span decades. But the mountain site is currently in preparation, and the clock will be open to the public once it's completed, Long Now said on its website. The foundation hopes visitors over the next 10,000 years will respect the clock and not steal pieces or sabotage the inner workings.

"I cannot imagine the future, but I care about it. I know I am part of a story that starts long before I can remember and continues long beyond when anyone will remember me," Hillis says on the website. "I sense that I am alive at a time of important change, and I feel a responsibility to make sure that the change comes out well. I plant my acorns knowing that I will never live to harvest the oaks.

"I want to build a clock that ticks once a year. The century hand advances once every 100 years, and the cuckoo comes out on the millennium. I want the cuckoo to come out every millennium for the next 10,000 years."

The engineers have already built a prototype that is itself designed to run for 10,000 years. Photos of the prototype and pieces of the full-scale clock can be seen in the gallery below.

The <u>Long Now website</u> includes some fascinating diagrams, photos and videos of the process. A local stone-shaping company, <u>Seattle Solstice</u>, is building clock pieces and developed a giant robot that will carve a spiral stairway into the mountain's vertical shaft. A video of that process, and several more interesting videos, are embedded below.

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Thouse courtesy of the Long Now Foundation. I of 22 | Share II is provided in the Long Now Foundation. Hide Caption A model of the 10,000 year clock is seen in front of a full-size gear at a Maker Faire in 2009. (Austin Brown / Long Now Foundation)

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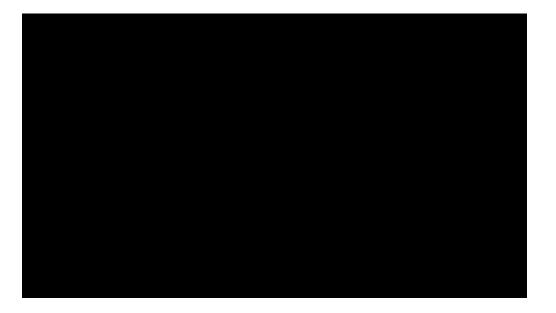
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