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Time to Spare, For 10,000 Years

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Designers often have to take the long view when creating products meant to last many years. But what if you had to design something intended to last 10 million? That requires some serious long-term thinking.

That's the concept behind the 10,000 Year Clock, a massive, 200-ft-tall mechanical clock housed inside a mountain and designed by Danny Hillis, a former Walt Disney "Imagineer" and co-founder of Applied Minds. Hillis first came up with the idea in 1995, and the clock—under construction inside a mountain in West Texas—is now the primary focus of his non-profit Long Now Foundation, an organization that hopes to encourage more of this type of long-term planning.



Workers are already constructing the network of tunnels that will lead to the 10,000 Year Clock. Image: Long Now Foundation

Over its lifespan, the clock will have enough self-power to keep time without the benefit of electricity, synchronize its time with the sun, and randomly generate songs on its chimes with enough variety that visitors won't hear the same song twice. The clock will run on thermal power, using the energy captured by changes in the temperature between day and night at the top of the mountain.

According to the official website, the clock will tick once per year, and include a century hand that advances every hundred years, along with a cuckoo that comes out on the millennium.

Why build such a clock? The Long Now site provides a fairly esoteric answer:

Part of the answer: just so people will ask the question, and having asked it, prompt themselves to conjure with notions of generations and millennia. If you have a Clock ticking for 10,000 years what kinds of generational-scale questions and projects will it suggest? If a Clock can keep going for ten millennia, shouldn't we make sure our civilization does as well? If the Clock keeps going after we are personally long dead, why not attempt other projects that require future generations to finish? The larger question is, as virologist Jonas Salk once asked, "Are we being good ancestors?"

Thanks to funding from Amazon.com founder Jeff Bezos and the efforts of engineering teams in San Francisco, Seattle, and Texas, the approximately \$42 million clock is now under construction in the Sierra Diablo Mountain Range near Van Horn, Texas. Full-size clock parts are currently being fabricated while construction teams dig the network of tunnels that will house the clock. Parts of the clock are built out of marine-grade stainless steel, while key moving parts will be constructed from stone and high-tech ceramics to discourage corrosion.



Once completed, visitors will have to hike for a day to reach what Hillis describes as a hidden entrance that includes two stainless steel doors. Visitors will have to wend the clock in order to see the correct time and date.

There are already some smaller scale versions of the clock, including an 8-ft.-tall prototype (built in 1999) at the Science Museum in London, and another millennial clock site has been purchased in eastern Nevada.

You can see a time-lapsed video of the chime generator construction, and a video of Hillis discussing the project, below:



Source: Long Now Foundation

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