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## THE MARCH OF TIME

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It's not an easy sell, this 10,000 Year Clock.

Even the most spry person who gets involved with the project will probably be dead before it ticks 75 times, and long forgotten while the timepiece is still in its infancy. The Long Now Foundation recently secured a remote 183-acre mountainside site to build the clock in eastern Nevada -- which by design is an extremely difficult and harsh climate to visit.

The idea of thinking 400 generations into the future runs counter to the current generation, which is all about thinking in the short now. Just the words "10,000 Year Clock" were probably enough to send most newspaper readers running from this article to the quick-fix haven of the CD reviews and the Jumble.

Stewart Brand remembers in 1996 when Long Now was just Brand and engineer Danny Hillis. The reception to the project was pretty dismal then, too.

"About three-quarters of the people we talked with at the time were at best amused and at most disgusted that we would waste their valuable time thinking about such a thing as a clock," says Brand, who started Long Now after founding the Whole Earth Catalog and the WELL, a groundbreaking virtual online community.

But if they had nothing else, both men had time on their side. And a decade after it started, their monument to long-term thinking has quietly gone from a crazy dream to being a few ticks away from reality.

As people walk by the Fort Mason headquarters of the Long Now Foundation in San Francisco, many stop in their tracks. Huge metal H.G. Wells-like contraptions -- mostly parts of the clock -- fill the space, looking futuristic and ancient at the same time.

Surrounded by a trendy restaurant and some business offices, Long Now opened quietly last month. Along with the scattered clock parts on display, there's a bookstore and a handful of employees working upstairs. A giant photo of the first prototype, a working quarter-scale clock, fills one of the walls. The real thing is at a museum in London.

Long Now is easiest to absorb when people discover it themselves -- reading simple explanations of each of the clock parts, along with the foundation's efforts to catalog important text and soon-to-be-extinct languages on microfiche-like storage documents called Rosetta Disks.

But it's a hard concept to explain in a few sentences, in part because Long Now and the clock mean different things to different people. The board of the foundation, including Broderbund Software co-founder Douglas Carlston and musician Brian Eno, is one of the most eclectic groups one could imagine.

"If you ask each one what this project is, they'll give you a totally different answer," says Executive Director Alexander Rose. "They all come with different takes, and that's a benefit to our project. I'm not sure what the common thread is, beyond the long-term thinking."

Instead of asking for an overview, the clock project makes more sense if you just ask individuals to explain why they got involved. Rose has been with the project since 1997, or "01997" as Long Now adherents prefer to say. (In the world of Long Now, Rome fell in 00476, the Declaration of Independence was signed in 01776 and "X-Men: The Last Stand" came out in 02006.)

"I'd pour my life for six months into a project, and then at the end of the six months people would look at this marketing material, and then it was basically worthless after that," says Rose, who worked for video game companies before Long Now. "(After talking with Brand) I just couldn't get this project out of my head. There were a lot of dot-com startups at that time and that was one direction I could have gone, but this is the project that seemed like it mattered."

Most of the foundation's energy recently has gone into building the clock, finding a suitable location and spreading the word. With so many complex thinkers involved, every decision seems well considered, with both practical and ceremonial elements. The Nevada location for the clock was chosen in part because it's filled with bristlecone pine -- the world's longest-living known organism, with some pines reaching nearly 5,000 years.

The 10,000-year time span was also chosen carefully.

"It's because we've had technology for just about that long," Rose says. "It's a human time scale, not a geologic or astronomical one, that makes you feel insignificant. The 10,000 years is 400 generations. You can almost imagine telling a story 400 times and having it work."

The hot topic in long-term thinking right now is global warming and the Al Gore movie "An Inconvenient Truth." But Long Now, by definition, seems to shy away from hot topics and politics.

Part of the foundation's outreach is a monthly free speaker series at the Herbst Theatre, which has featured an unpredictable group of thinkers from different positions, so it's nearly impossible to accuse the foundation of having a political agenda. John Rendon, known for his work with the CIA and efforts

to overthrow Saddam Hussein, was one recent speaker. Author William McDonough is the guest on Sept. 8, and John Baez shows up in October.

Long Now has other projects, including the Long Bets Web site ([www.longbets.org](http://www.longbets.org)), which tries to make long-term thinking fun with competitive predictions. But the clock seems to be the biggest focus of the foundation -- it certainly gets the most press interest and the most gallery space.

"It really did seem to have mythic depth as an idea," Brand says. "There is a crying need, I felt, for some longer-term time reference and frame of thinking. Everything seemed to be accelerating, with people focusing on a closer horizon and losing track of a farther horizon."

For the typical science-fiction geek, Long Now is pretty much as good as it gets. You can go see a movie or read a book and lose yourself in another world that someone else created, or you can enjoy the same type of thinking with the 10,000 Year Clock.

Although the clock itself can be a difficult conversation starter, talking about the project will lead you to some interesting twists and turns -- and some of the stuff the clock people blurt out can be quite cool in a "Minority Report" kind of way.

"Once you start thinking about building it, the conversation changes to long-term thinking," Rose says, standing next to the project's alien-looking chime system. "What are the people's hands going to be like that actually wind this thing?"

Hillis, in particular, has a Douglas Adams thing going. The inventor-scientist-author owns that dangerous combination of incredible intelligence and a wicked sense of humor that should make everyone thankful he's using his powers for good. While adding to the group's engineering quotient, he also ensures that generations in the distant future will know that people in the 21st century were funny.

(Hillis on the indestructibility of the 22-pound softball-size tungsten pendulum bob that the clock will use: "I recommend that you keep your bob away from extended contact with plasma torches, high-power laser beams, diamond-cutting wheels and highly corrosive acids, as these may cause unsightly surface blemishes.")

The 10,000 Year Clock has a lot of moving parts that slide, but very few gears, which strip away and impede the accuracy over long periods of time. It's built so that future generations can figure it out by looking at it -- and fix one part of the hulking machinery while the rest of it continues to move. The clock has eight patents, and several state-of-the-art materials and technologies were used to build it.

But as much of the design of the clock seems focused around the future, there's also a strong emphasis on lessons from the past. Potential vandalism is one of the biggest concerns of the project leaders, and Rose is filled with history lessons that could apply to the clock.

"The Taj Mahal used to be encrusted at every hallway and every part of it with jewels," Rose says.

"When it was sacked, finally by England, instead of burning the thing to the ground, they spent a long time prying all those jewels out. By providing really high monetary value objects, easily stealable, it slowed them down enough that by the time they were done, they realized the building itself was worth saving."

While the clock exists as a prototype -- and the foundation by all accounts is going forward with the real thing -- the device also has some mythical qualities that are bound to spawn 100 centuries worth of urban legends.

"Penn Jillette suggested that the real way to do this is make a video documentary of the making of the clock and then hiding it, but not actually doing it," Rose says. "(The clock) never gets found, but people would become intrigued. The mystery of the clock becomes the real thing."

Rose sits by his second-floor desk, which overlooks part of the gallery and the front windows. It's the optimal perch for watching pedestrians stop, exchange confused looks at the Long Now exhibits, and then leave.

"And then you'll see them about three days later bringing some other friends, explaining it," Rose says. "And when they explain it, that seems to be when they start to get it themselves."

Anyone who thinks about the clock for a while knows that the chances of this project surviving for 10,000 years aren't particularly good -- and it has nothing to do with the physical design. Rose talks about an engineer from India who, after a presentation on the clock, suggested that in 3,000 years future societies would be sacrificing a virgin on the thing -- which would gum up the works and end everyone's hard work.

"My response was, 'Before you walked into this room, you weren't thinking 3,000 years into the future, so it's already worked,' " Rose says. "The short-term goal is to change the conversation. It's a piece of theater, but when you take something seriously enough to actually build it, you go beyond just the conversation and allow a lot of other people entry into that thought process."

Rose says the idea of an institution is much more difficult than the engineering hurdles that the foundation has faced. Although society has built some fantastic clocks during the past 100 centuries, humans haven't successfully built a 10,000-year institution yet.

But what happens in the year 07006 might not be the most important thing. Long Now supporters seem satisfied that more and more people are talking about the clock in 02006.

"It's the maypole. All the rest is just dancing around it," Brand says. "The clock already exists in people's minds -- partly because it's an amazing idea and partly because they quickly realize we're serious about building the damn thing. And that seriousness starts to give it a sense of reality before it exists."

The Long Now Foundation headquarters (Fort Mason Center, Landmark Building A) is free and open to the public, with an official launch on Sept. 8. The speaker series continues with William McDonough on Sept. 8 and John Baez on Oct. 13. For more information, visit [www.longnow.org](http://www.longnow.org).

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