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IDEAS & TREND; A Clock to See You Through The Next 10,000 Years

By PATRICIA LEIGH BROWN

WITH a clickety-click and a Zen Buddhist gong punctuating the ceremony, some of the people most associated with the dizzying acceleration of the culture ushered in slowness as the new frontier. They activated the prototype of The Clock of the Long Now, the tool designed to measure the next 10,000 years and beyond.

"Hours are an arbitrary artifact of our culture," said Danny Hillis, the clock's inventor and the scientist who pioneered the concept of parallel computers that is now the basis of most supercomputers. "The chance of people using hours 10,000 years from now is probably pretty low."

Its spiraling pendulum now slowly twisting, the prototype, an exquisite 9-foot-tall object that first began keeping time welcoming that millennial New Year's Eve, has been called the world's slowest-moving computer. Constructed of brass and monel, a nickel and copper alloy, the clock slightly resembles a futuristic jukebox that computes using mechanics instead of electronic circuitry to calculate extremely slow increments of time. The prototype -- which will travel to the London Science Museum this summer -- tracks the moon's position and phase, local rising and setting times of sun and moon, equinoxes, solstices and the Gregorian calendar up to 10,000 years from now.

Andrew Nahum, project director of "The Making of the Modern World," the exhibit on the history of technology in London, called the clock "an example of sublime technology," not only because of its ingenious mechanics but also because of its "moral reflection."

After three years in a Sausalito machine shop, the prototype made its public debut recently at the TED Conference, the annual powwow for the New Economy's power elite in Monterey. Part latter-day "magic box," as John Harrison's 18th-century longitude-tracking chronometer was called, part conceptual art, the clock has become the cause celebre of a heady cadre of Bay Area thinkers and futurists, among them Esther Dyson, the author; Douglas G. Carlston, the co-founder of Broderbund software; Kevin Kelly, founding editor of Wired, and Stewart Brand, creator of The Whole Earth catalog and the early online community the Well. Ever the phrase-coiner, Mr. Brand calls the clock "a patience machine" and "a steam engine for the information age."

Along with his cohorts, Mr. Brand started The Long Now Foundation ("long now" is a reference to deep time coined by the British musician Brian Eno) to raise money for the project, which is to include a separate digital linguistic archive with the Book of Genesis in a thousand languages. The long-term plan is to build an 80- to 90-foot version of the clock and ensconce it among the bristle-cone-pine forested limestone cliffs of White Pine County, Nev., literally the middle of nowhere. The foundation has already bought 186 acres adjoining Great Basin National Park. The idea is to do for thinking about time what photographs of Earth from space did for thinking about the environment, to "reframe human endeavor," Mr. Brand said, "not with a thesis but a thing."

It's quite a thing. Its fastest dial moves once a day; the slowest, once every 10,000 years and beyond.

As an artifact projected to be accurate to within one day every 20,000 years, the clock may be seen as a

grandiose atonement for the sins of Internet time, or perhaps the ultimate boy-toy. The prototype, now sitting at the foundation's headquarters in The Presidio, an old general store building with creaking stairs and lumpy plaster, breaks new technical ground.

Its most riveting feature may be the "Equation of Time" cam, which looks like a sculptured torso but is actually a mathematical calculation rendered in three-dimensional form. It measures the 26,000-year precession of the equinoxes, accounting precisely, Mr. Hillis said, for elliptical eccentricities in the Earth's orbit.

The most heavenly looking element is the face, a rotating black sphere that charts the paths of the stars, one of the oldest forms of telling time. A measuring device called a rete traces the stars' positions over millennia. (For instance, 13,000 years from now, Vega will be where Polaris is -- in the center of the clock's star field.)

In designing his antidote to civilization's "pathologically short attention span," as the Long Now literature puts it, Mr. Hillis (who once made a computer out of Tinkertoys) has tried to learn from the mistakes of previous long-range messages like the Phaistos disk unearthed in Crete in 1908, which features 241 symbols in an ancient form of Greek that predates Homer. Instead, he looked to Big Ben, the work of an inspired amateur named C.B. Denison, and places like New College, Oxford, where a 19th-century reconstruction of the main hall used 14th-century oak trees planted in anticipation of a day hundreds of years in the future when the beams might need replacing.

THE most controversial philosophical conceit of the clock may be that it was deliberately designed to require human winding, an idea meant to foster the idea of responsibility. How it would be wound and by whom has yet to be determined. Maybe a ritual, like Stairmasters, offered Mr. Brand.

To Dr. Gregory Benford, a professor of physics at the University of California at Irvine and author of "Deep Time: How Humanity Communicates Across Millennia" (Avon, 1999), the clock is noble but flawed. "It's too pretty," he said. "The first biker gang to come along is going to trash this thing. If they made it rugged and ugly, it might last."

At the foundation's offices in the Presidio, a 22-pound tungsten pendulum bob lay on a table -- the ultimate geek paperweight. Donors of $50,000 or more can get one of their very own with an unusual set of instructions: Care and maintenance of your pendulum bob mostly involves preventing people from dropping it on their toes. With proper care, it should outlast your civilization.

In a profound sense, the clock, a jewel-like gesture toward the infinite, reflects deep anxiety about time in an increasingly whirlwindish culture. "It's about the coming of age of the kids who were going to save the world," Dr. Benford observed. "And like all deep-time monoliths, it's a mirror."

Photo: The prototype of a clock that will be buried in the middle of nowhere, namely Nevada. (The Long Now Foundation)