Technology
Clock **project inspires** long-**term vision in** Silicon Valley**.**

Wired on Friday: It's one of the world's most precise computers - and one of the slowest. The Clock of the Long Now is meant to keep time for the next 10,000 years, roughly as long into the future as the concept of civilisation goes into the human past.

It's the brain child of technologist Danny Hillis, and the most concrete implementation of the ideas of the Long Now Foundation, a San Francisco-based group who encourage thinking about the long term. The very long term.

This prototype of the clock - the second of at least three, and perhaps many more before the final clock is unveiled - stands 10ft high. Its bottom half is an assemblage of complex horizontal gears, which make beautiful but hauntingly arhythmic tinkling sounds.

The top is an orrery display that uses the position of the planets to convey the time precisely, though not necessarily immediately obviously.

It is mechanical, but digital - those gears are many serial arithmetic adders that calculate the planets.

The clocks are certainly expensive timepieces; the term "precision workmanship" takes on a whole new meaning when the warranty is 10 millennia, and the accuracy has to be measured in seconds. For such a seemingly quixotic and costly project, the foundation relies mostly on rich patrons.

Commissioned for a private home in the UK, the Long Now Foundation cut a deal by which they built two clocks for the price of one. They're now working on a copy of this prototype that will eventually go on public display.

But while money and benefactors may always be a question, the clock and its creators have a huge groundswell of popular support among the technologists of Silicon Valley. Its key figures, Stewart Brand and Danny Hillis, are heroes to many here.

The Long Now Foundation's monthly speaker series play to packed houses. Why would that be? After all, the greatest and most convincing criticism aimed at the Valley is its ridiculously short-term thinking.

Time to ship product is measured in weeks, not months here: the future rarely exceeds past the next 18 months. The idea that anyone in this cut-throat world would consider posterity seems laughable.

But they do. Local science fiction writer Rudy Rucker called it "the great work", the idea that many of the technical minds in the Valley are, consciously or not, pursuing a higher project, like the cathedral-builders of the Middle Ages.

It's that other utopian half of the Valley, and the engine for the majority of the ideas that are then smoothed into money-making businesses by the venture capitalists and entrepreneurs. So what can we learn about the near future, the technologist's future, from their interest in the Long Now, its clock, and its far more distant timeframe?

Perhaps we can begin to see what technology might be like if it was freed from its short-term requirements, and given, as a rich patron provides a famous artist, time to find its own way.

Everything about the clock is beautiful. Made from brushed steel, with the occasional brass coloured gear, it looks ancient and modern simultaneously. Designed to be sleek, highly functional, but simple enough for

future generations to be able to divine its workings by looking at it, each 26-bit gear moves a carved stone planet of the orrery display relative to the sun in the centre.

The beauty is part of the long-term strategy. By making the clock lovely as well as complex, the designers hope to encourage future generations to hold it in high regard and protect it, and most of all, to wind it or supply it with power to keep it on its 10,000 year mission to connect the now to the future in a meaningful way.

It's also Danny Hillis's gift to the project. Hillis is the engineer's engineer: a man famous for creating intricate and perfect mechanisms and systems (he developed the world's largest parallel computer; he also built a noughts and crosses playing machine from Tinkertoys).

If there's anything that points to Silicon Valley having a higher aim, it's that it has a sense of aesthetics. Hillis's work has always embodied that aesthetic; even though not financially successful, his designs still prompt geeks to coo with delight.

The clock is beautiful to the innocent observer, but it is even more fascinating to those who wonder how such things work.

Of course, most of the Valley doesn't have time for aesthetics, but the exceptions are significant. In a time of commoditised computers, Apple Computer has done a fine job in taking fine design, and making it a premium.

More practically, with growing frustrating over the brittle nature of our networks and our PCs, the idea of designing a digital device that is expected to last more than 18 months isn't so far-fetched any longer.

And whether you argue that the Clock of the Long Now is useless, or will only have a use long after we are dead, it clearly has some function in the present.

Watching designers and techies in California watch the Clock of the Long Now, and argue about what designs could last for 10 millennia, asking what the world would be like along the way, you could see their own digital gears whirring.

Though nowhere in its clockwork mechanics, perhaps what the clock gives the Valley is a counterbalance: teaching those whose bodies are usually stooped over code or hardware blueprints to stretch and look out a little further than their careers and industries permit. Perhaps if we reach for 10,000 years we may get better, more beautiful, less fragile technology in 10 years.

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