Posted by **timothy**on Tuesday September 06, 2011 @11:03AM from thetime-is-all-we-have-really dept.

Kevin Kelly ("Senior Maverick for Wired Magazine," among many other things) is back with answers to a selection of thequestions posed to him by Slashdot readers. Read on below for his take on travel, the Long Now Foundation (including the 10,000-year clock — clocks! — that is among the foundation's projects), the future of fusion, and what to do about inevitable widespread suckage.

Why "exotropy"?
by ynotds

I still cite Out of Control as the most readable introduction to the oft confused subject of complexity, and am right now wading through What Technology Wants but finding it far more forced (sleep inducing). While I clearly don't disagree with the idea of seeing technology as a partner with humanity [meme.com.au], your newer book reads like you have invested too long in a world constructed from your imaginings and cut back your level of interest in looking at what is actually going on, an interest which seemed to pervade your earlier projects.

Yes, I am well past your rationalization for abandoning "exotropy", so what I really want to know is whether we are all going to be condemned to defend our business models to the death?

Kevin Kelly: I don't really understand the question, but let me suggest that money is generally becoming less important, even as more of life becomes monetized. Money (and business) will become ubiquitous, but as money and business becomes super abundant, they will also become less valuable, less prized, less meaningful. Even super wealth is less important. The richest billionaires in the world control hundreds of millions times as much money as an average worker in the US, but the clothes billionaires wear, the cars they drive, the food they eat is not a hundred million times better. In fact often the rich don't even dress as well as the poor.

In a very real way, beyond a certain level of wealth, the extra billions is meaningless; more a matter of status than anything else. A hundred years from now the richest person may be a zillionaire, but their life will not differ much from a billionaire. Most of the people in the world are not far above the poverty line, and very far from millionaires. But as business and money and cash flows becomes the norm as billions of people rise up out of poverty, it also diminishes as the vehicle for power and status.

Value of travel?
by EricBoyd

I know that you did a lot of travel when you were younger (e.g. backpacking in Asia for years). How important was that for your status as a "Renaissance man"? Would you still recommended extensive travel to young people, or has globalization changed the opportunities?

KK: Globalization amplifies the value (and ease) of travel, while travel amplifies globalization. I've found there is no better education dollar for dollar than traveling. No matter what kind of learning you want to do, whether schoolbook, or business research, or artistic, or goalless exploration, then travel is your best bet. I think a lot of the woes of America could be cured by establishing a two-year national service requirement for all youth, without exceptions,

which could be fulfilled by service abroad -- Peace Corp like -- in hundreds of different programs in alien places.

The benefit of travel like this is confronting "Otherness." The Other forces you to examine your assumptions, to question your beliefs, to stretch your perspective, to widen your horizons, and to entertain alternatives -- all skills worth a million dollars in today's world. You won't get very much of this at college. But go to India, or the Congo, or Albania, and its Otherness will teach you.

Tool philosophy for software tools?
by TheLoneGundam

What is your philosophy on software tools? Do you prefer to use a lot of small pieces, loosely assembled, using scripts to join things together and get things done, or do you like to find a software suite (such as Office) and work within that?

KK: Despite co-founding the Hacker's Conference, I am not a hacker. I am not at ease with code, so I tend to use off-the-shelf software programs. My shopping philosophy is to aim for the highest-common denominator. In other words to find the highest quality tool that has been adopted by the largest number of people. I avoid the highest possible quality if only a few folks are using it because support will be minimal and expensive. I also avoid a very popular tool if higher quality is being used widely by others. This is why I am a fan of Costco, which also aims at highest-common denominator goods. They sell not the best, but stuff at above-average quality and very populist prices. Occasionally I will be an early adopter, but most times I let others pay the price for beta versions. I prefer my tools to be well-proven. My site Cool Tools was set up to offer recommendations of well-proven tools. Only a very few of the ones we feature are brand new tools.

The 10,00 year clock
by strangeattraction

Will there be an actual clock completed (other than prototypes) before the 10,000 years are up?

KK: Indeed. Within your lifetime there will be at least one 10,000-year clock built in west Texas. At this very moment a mechanical-digital clock is being constructed inside a mountain on the property owned by Amazon CEO Jeff Bezos. When done it will be about 200 feet tall. And you can sign up now if you would like to visit it when its finished.

Long-term thinking
by hereisnowhy

One purpose of the Long Now Clock is to encourage long-term thinking. Aside from the Clock, though, what do you think people can do in their everyday lives to adopt or promote long-term thinking?

KK: The 10,000-year Clock we are building in the hills of west Texas is meant to remind us to think long-term, but learning how to do that as in individual is difficult. Part of the difficulty is that as individuals we constrained to short lives, and are inherently not long-term. So part of the skill in thinking long-term is to place our values and energies in ways that transcend the individual -- either in generational projects, or in social enterprises.

As a start I recommend engaging in a project that will not be complete in your lifetime. Another way is to require that your current projects exhibit some payoff that is not immediate; perhaps some small portion of it pays off in the future. A third way is to create things that get better, or run up in time, rather than one that decays and runs down in time. For instance a seedling grows into a tree, which has seedlings of its own. A program like Heifer Project which gives

breeding pairs of animals to poor farmers, who in turn must give one breeding pair away themselves, is an exotropic scheme, growing up over time.

10,000 year clock
by Anonymous

Australia is a geologically stable (and ancient) place... does the foundation have any plans on building a similar clock downunder, and if so, when? How can one help out in the construction (if at all)?

KK: The hope of the Long Now Foundation is that many clocks ticking for ten-thousand years will be built all around the world -- Australia, too. They don't all have to be monumental, like the one in Texas. They could be household sized. And it very well may be the the monumental clocks are the ones that are pillaged and disabled over the centuries, while smaller less prominent ones keep ticking. Perhaps after 10,000 years the only clock still ticking is one at the end of a dusty road in the outback that almost everyone had forgotten about.

Serious Question
by bughunter

Why don't we have fusion power yet? What are the specific technical, political, economic and social obstacles to replacing dirty fossil fuel and potentially catastrophic nuclear fission power plants with nuclear fusion plants? I know this is kind of a "where's my flying car" question, but I feel that if our society really wanted affordable, practical fusion power to replace fossil fuel driven plants, we could achieve it, but we have barely even started down that road. Why not? What would it take to make it a priority?

KK: Building a synthetic sun has been much more difficult that it first seemed. Research on fusion has been going on steadily for almost 50 years, and each year the researcher have felt they were "only 1 year away" from getting it. That constant gap makes it hard to believe in now. But in fact, science has generated net positive fusion -- the energy out surpassing the energy needed to create the fusion -- but it is no where near an economic positive, nor anywhere near industrial rates. In other words only toy amounts have been generated. Scaling down the sun by a zillion times is proving hard. And there are some scientists who believe that it cannot be brought to an economic feasible method -- at least at current energy prices -- which is part of the reason why we have not made it priority #1. I think when there are a few more demos of it working for sustainable periods in the prototypes, it will become more believable (or obvious). Or if energy prices really hit the roof.

Philosophical implications of cheap fusion energy?
by Anonymous

*Putting aside any political or social unwillingness from the powers that be, in a far future, in a world with large scale fusion energy production, man kind will at long last have an almost free lunch. For, what, if I may ask, will the cost of anything be when everything can be made from recycled chemical elements and lots of almost free energy from large scale fusion of abundant hydrogen? Gadgets can be made, food can be made (who needs cows when you can engineer your own steak from scratch? Nature makes protein by chemical processes anyhow...) Are you worried about environmental pollution? Well, we pollute *now* because it costs us money to not pollute. We don't make stuff environmentally friendly *now* because it costs more than the dirty stuff. But with free energy we have the means to do stuff right. After all, under the assumption of free energy, the cost of doing it right is not higher than the cost of doing it dirty. Overpopulation will of course restrict the amount of space available for habitation, so wars will be fought over land, but in the far end who needs a pile of expensive dirt on the earth when there is so much free space in space?*

What are the social implications of such a thought experiment? What happens in a society when goods cost nothing? Is there any need for money anymore? And even if you needed money for some reason how would you acquire it? Remember that your salary is your compensation for your labor, and labor has long since been replaced by machines running on cheep energy.

They tell me that fusion is only 50 years away...
So in a post fusion world, where is man-kind headed in your opinion? Will my grandchildren see a reconstruction of society?

KK: If energy followed the same curve as computation and was half as cheap each year, what kind of world would we make? It could be a pretty scary world. George Dyson, science historian, son of Freeman Dyson, who worked on nuclear weapons, believes that "free" fusion power would be the worst thing that could happen to our civilization. Sort of like giving an unrestricted million dollars to a 12-year old. What could go wrong? Unlike George I don't worry, although I do believe it would be completely disruptive.

First, I don't believe fusion would ever be "free." It would certainly be cheap, but the cheaper it got the more difficult and costly getting rid of the heat in society would be. And I'm not just thinking of the global warming effects (which would be significant) but more on where you put all the energy you are unleashing each minute. It has to exit the biosphere somewhere. If we had to make giant planetary radiators, there would be a cost to those, which would be added to the cost of generating the power. What that means is that while the calories (BTUs, ergs) would become ever cheaper, the other aspects of energy -- storage, removal, management, etc. would become more complex and costly.

Energy is more than just ergs, just as computation is more than just transistors. Transistors are essentially free per transistor, but your laptop still costs $700. An erg may become essentially free per erg, but your energy use may still cost $700.

Nonetheless, having extremely cheap energy would radically alter our landscape. I think we'd build a lot of moving bots and make a lot more gadgets. Maybe our shelters would be more kinetic, flexible. We'd certaintly travel even more. I have no fear of overpopulation; rather ever more depopulation as robots did more of the hard "manual" work. It would be a different world.

15 years after the invention of the PC
by Anonymous

... it started sucking, with Microsoft and Intel dominating everything. Anyone who came out with a cool idea was given an offer they couldn't refuse. And if they did refuse it, they were toast.

Are we on a similar suckage curve with the Internet? Although it was arguably invented in the '70s or even before, it only came to the attention of most people in the mid '90s.

KK: Sucking is inevitable. Suck would take over the entire universe if we did not keep inventing new things that did not suck. For a while. Even better is that the frontier of the new keeps expanding so we have more new ways to create anti-sucky coolness -- even while the things we invented yesterday are starting to suck. As long was we can keep the game going, the forces of cool will outweigh the forces of suck.