
THE DAILY YOMIURI

Care to make a long bet about machine intelligence?

By John Jerney Special to The Daily Yomiuri.

1,018 words

9 April 2002

Daily Yomiuri

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English

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Can a computer fool a person into believing that it is intelligent? And if it does, does this really mean that the computer is intelligent? And perhaps more importantly, in what time frame could such an event possibly take place?

Mitch Kapor and Ray Kurzweil have strongly opposing views on the subject, and they have decided to do more than make simple public pronouncements—they have decided to make a bet.

Kapor and Kurzweil, as you might recall, are both well versed in what computers can and cannot do. Kapor was founder of Lotus Development Corp. and author of one of the original spreadsheet programs for personal computers.

Kurzweil likewise is a computer industry pioneer with a series of inventions and startup companies under his belt ranging in fields from music to speech recognition.

The question at hand is whether a computer will be able to beat something called The Turing Test by the year 2029.

The Turing Test, sometimes called the Imitation Game and devised by the English mathematician Alan Turing, is commonly considered the most reasonable way to determine whether a machine can be thought of as intelligent.

More than half a century ago, Alan Turing realized that it might take longer for humans to agree on what constitutes real intelligence than it would for a computer to actually exhibit characteristics and behavior that most of us would consider intelligent.

Using this as a basis, Turing suggested a simple test to determine whether a computer had humanlike intelligence. The test went something like this. Imagine a questioner sitting in one room, communicating with two participants, a person and a computer, positioned in other rooms using a simple text-messaging program, such as Internet chat or something similar.

The questioner is never allowed to see or directly hear either of the participants, thereby removing the most obvious differences between man and machine. In the meantime, however, the questioner would be able to pose any question to either participant, about any subject and in any depth.

Turing speculated that if a computer would be able to fool the questioner (and perhaps several questioners), into not being able to identify which is man and which is machine, the computer could be said to have humanlike intelligence.

So far, no computer in the world has come even close to passing The Turing Test, not even the super computers that can beat chess champions or solve complex problems in astrophysics.

And Kapor believes that no computer will likely be able to do so until after 2029, if at all. Kurzweil believes otherwise. And as a measure of their confidence, both men have backed their opinion with a 10,000 dollars bet through the Long Bets Foundation.

The Long Bets Foundation (<http://www.longbets.org>) is the brainchild of Stewart Brand and Kevin Kelly, and serves as a vehicle for people to put a financial risk behind the technological, scientific, and social predictions that they make.

The monies that are wagered are all targeted towards charities, making Long Bets a new type of philanthropic vehicle, in addition to serving as a novel way to keep track of some of the most interesting predictions, both long and short term.

The rules of Long Bet are simple. The minimum bet is \$1000, with no maximum. The money is placed in a long-term investment portfolio called the Farsight Fund and run by Capital Research. There is a two year minimum for the period, in which the bet takes place, but there is no maximum time period.

The nature of the bet must be designed so that there can be a clear winner in each case, and the odds are set at even. Furthermore, each bettor must provide a written explanation of their position, and why they think that their side will win.

Aside from the high-profile bet between Kapor and Kurzweil concerning machine intelligence, there are several other thought-provoking contests under way including whether "commercial passengers will routinely fly in pilotless planes" by the year 2030, and whether "more than 50 percent of books sold worldwide will be printed on demand at the point of sale in the form of library-quality paperbacks" by the year 2010.

Other more esoteric bets include whether the universe will eventually stop expanding, and whether a profitable video-on-demand service aimed at consumers will be available in a reasonable time frame.

Some bets are so long term, such as the one concerning the expanding universe, that the dates are even given as 02002, with an extra digit to prevent bugs arising from the **Y10K** problem. Similar to the Y2K problem, the **Y10K** problem will kick in when clocks turn over from the year 9999 to 10,000. Now that's forward thinking.

Not all bets have been taken, however. For example, at the time of writing, a bet stating that tickets for space travel to at least the moon will be available over the counter by 2020 had yet to find a person in opposition. Likewise, a bet that a comprehensive world government will be in place and in control of major social elements by the year 2100 is still available.

Back to the question of The Turing Test, I think I will have to side with Kapor and say that machine intelligence will still come up short by 2029. However, not by much. I would think that the year 2050 would be a much safer bet, at which time quantum computers capable of applying parallel connectionist (neural) algorithms should be pretty much mainstream.

Either way, keep your eye on this and other long bets. Some of the predictions are bound to come true-the question is, which ones.

Jerney is president of Volksware, Inc., a Silicon Valley-based publishing, consulting and professional services firm specializing in e-commerce, mobile computing, the Internet and Web publishing. If you have any comments, suggestions or questions about Silicon Valley, please send them along to jerney@volksware.com.

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