



# Intelligent Computers Coming

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The Biden Administration recently created a series of guidelines and federal programs designed to both protect the human race from the dystopian consequences of artificial intelligence and promote the development and adoption of AI in the U.S. economy. But that raises the question: how far are we, really, from having machines that are capable of outthinking us?

A recent article by Peter Diamandis, chairman of the XPrize Foundation, and author of *Bold and The Future is Faster than You Think*, recently updated something called Moore's Law on the state of, and future of, computer capabilities. Moore's Law basically states that the number of transistors on an integrated circuit will double every 18-24 months. The prediction was made in 1965, and it has proven to be remarkably accurate over the last 58 years.

To see this exponential growth in computer power, Diamandis invites us to think about Intel's 4004 integrated circuit, introduced into corporate and laboratory research computers in 1971. It included a remarkable 2,300 transistors.

Today, Apple Computer's M1 chip includes 114 billion transistors, and the price per transistor has dropped from roughly \$1 to about a billionth of a dollar. Moore commented that 'If the auto industry had advanced as rapidly as the semiconductor industry, a Rolls Royce would get half a million miles per gallon, and it would be cheaper to throw it away than to park it.'

The point here is that today's AI programs like ChatGPT are possible because we have more computing power than ever before. But what we should be paying attention to is the fact that the average computer chip will be twice as smart by the middle of 2025, and twice as smart again by Christmas of 2027. And that doesn't take into account the possibility that quantum computing will become mainstream within that time frame, radically improving the processing speed and power of our thinking devices.

Author and historian Yuval Noah Harari has memorably said that our computer industry is rapidly creating intelligence without awareness. Today, you can use AI to access information more readily. Just as the internet gave us much faster and easier access to more and better

information, AI is making it much faster and easier to scour the internet for the information we want or need. ChatGPT can now simulate human conversations and write plausible summaries, articles, and email messages.

We don't know what AI will do in the future, in part because it's not easy to imagine all the possibilities of having a superior intelligence living in your phone. But it might be an understatement to say that this would be a transformational event in our daily lives, something we all (not just the government) should probably be paying more attention to.

**Sources:**

<https://www.diamandis.com/blog/scaling-abundance-series-16>

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