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THE CIO

2020

VISION AWARDS

**20 WHO MADE IT POSSIBLE.**  
**20 WHO MADE IT HAPPEN.**

Your Guide to 40 Leaders Driving the Information Age PAGE 56

## RAY KURZWEIL

Founder, Chairman and CEO  
Kurzweil Technologies Inc.

When Ray Kurzweil was 7, he discovered Tom Swift Jr., the boy wonder book series hero who was forever getting into perilous scrapes—and saving the day (often even the world) by retreating to his lab to invent something. It's no surprise, then, that Kurzweil grew up convinced that any problem can be solved if you simply apply yourself.

Kurzweil applied himself assiduously from an early age. At about 16, he built his own computer and programmed it to analyze music and compose new works in a similar style. He invented the first reading machine in 1975 after a blind seatmate on an airplane inspired the initial application of his omni-font optical character recognition technology. To build the reading machine, he also had to invent the Charge Coupled Device, or CCD, flat-bed scanner and text-to-speech synthesis—which he did in about a year. Pop singer Stevie Wonder was the first to purchase the reading



machine, and the resulting friendship between the two ultimately led Kurzweil to develop the Kurzweil 250, the first synthesizer to reproduce realistic piano and orchestral sounds. A slew of other inventions followed, including speech recognition technologies and pattern recognition algorithms that predict stock market performance. Author of the best-sellers *The Age of Intelligent Machines* and *The Age of Spiritual Machines*:

### All He Has to Do Is Dream

Ray Kurzweil does most of his creative thinking in the lucid dream state, programming his brain to ponder a problem while he sleeps. Free from inhibitions, he often makes new connections while dreaming; when his powers of logic return upon awakening, he's visualized inventions, solved key problems and conceptualized book chapters. Using this technique, he has hit on a new way of doing virtual reality, for which he's filing a patent. We can only imagine what this means for Ramona, his virtual reality alter ego. (To meet Ramona, visit [www.kurzweilai.net](http://www.kurzweilai.net).)

*When Computers Exceed Human Intelligence*, Kurzweil, 54, is currently cowriting a book on reversing the aging process that summarizes the most current research on how to prevent a wide range of diseases.

"I really do think you can solve any problem if you put your mind to it," he says. "Most people don't take the time to think." Luckily for the rest of us, Kurzweil has. —Alice Dragoon