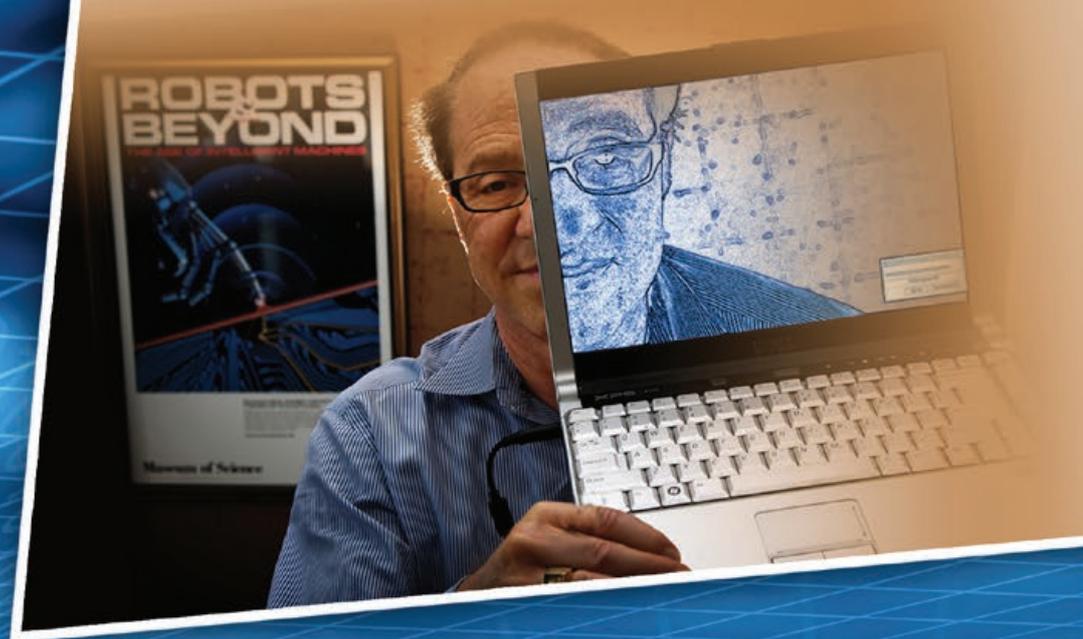# Welcome To The Future

Ray Kurzweil is a futurist who is noted as one of the 15 men who have shaped modern America. He is one of America's greatest geniuses, having invented much of the technology that has become part of our daily lives. He is chiefly famous, though, for his ability to predict what is coming next.

As an insider, Kurzweil has demonstrated an uncanny ability to accurately predict what fresh technology surprises are in store. What he is predicting now, however, is both astonishing and chilling.

- Dov Levy

It was a frigid day on February 15, 1965, when a young man named Raymond Kurzweil took the podium as part of a game called "I've Got A Secret." Ray, as he was popularly known, sat down at a piano on the stage and played a tune for several minutes. The melody was supposed to allude to a secret that only he knew. Two experts sat at a table in front of the platform; their job was to guess what the secret was.

The experts bombarded Kurzweil with all sorts of questions about the music he had played. Finally, one of them asked, "Did you compose that piece?"

"No," Kurzweil replied.

The men tried to guess who the composer might be, but every name they raised was rejected. Finally one of them hit the jackpot: "Was the music composed by a computer?"
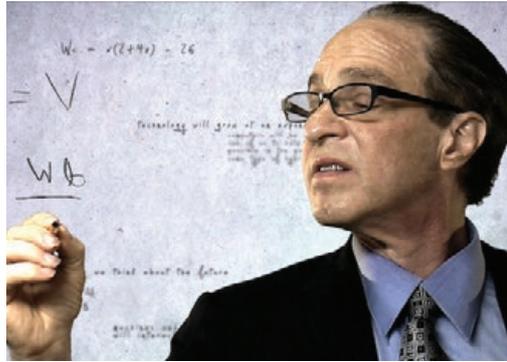
"Yes!" Kurzweil called out joyously. The entire crowd burst out laughing and the contestant was handed the prize.

This incident occurred when Kurzweil was just 17. The computer that composed the music was not one he had purchased in an electronics store. In fact, Kurzweil had built it himself. He programmed his computer to analyze the music of famous composers and learn what a musical composition should sound like. Based on that, the computer was able to compose its own original music. Kurzweil connected the computer to a typewriter that printed out the notes of the new composition.

Later that year Kurzweil won first prize at the International Science Fair for his invention. Kurzweil was one of 20 young inventors who were invited to the White House to meet President Lyndon B. Johnson. That was the just the first of dozens of international awards and medals that Kurzweil would earn for his creations that since then have transformed the lives of millions of people.

Who is Ray Kurzweil?

Kurzweil grew up in a secular Jewish home in Queens where his parents regularly discussed

Kurzweil's mind is constantly bubbling with new ideas.

A computer running one of Kurzweil's old computer programs for composing music.

new ideas and inventions. The young Kurzweil was blessed with an active and creative mind, and his parents constantly cultivated his creativity. Ray's father was a busy musician, but whenever he heard of a new invention or scientific advance he shared it with his wife and children. The result was that Ray's natural talent for original thinking was cultivated from an early age.

That is how he reached the point where at the age of 17 he was able to program a computer to compose music. At first glance, that seems impossible. Composing music does not involve logic. Music is based on human characteristics of emotion and artistic genius. Kurzweil, however, proved that once a computer is programmed to follow certain basic rules, it is capable of composing real music.

When Kurzweil enrolled in the

Working on the reading machine at his company in Cambridge, Massachusetts, in 1976.

Kurzweil with the scanner he helped develop.

Massachusetts Institute of Technology (MIT), he studied computer science. In no time he created a computer program that matched up students with colleges and universities around the world. A student would answer the program's questionnaire and the program would provide information about universities best suited to that student's needs and abilities. While still in college Kurzweil founded a company to produce and market his program. A year later, he sold the company for $100,000— and this was before he even graduated!

Reader for the Blind

A few years after Kurzweil graduated, Optical Character Recognition (OCR) technology had just been developed. This allows computers to recognize and read printed

Presenting his reading machine to an activist for the blind.

Massachusetts Governor Michael Dukakis presents Kurzweil with an award for his reading machine.

text. For example, using OCR one can ask the computer to search printed text for a specific citation.

Today, this technology is taken for granted. We are so used to being able to scan long documents and search for the exact words that we do not stop to think about how this is achieved. When Kurzweil got involved in this technology it was still in its infancy. For example, OCR programs only recognized a limited number of fonts. Today, virtually any type of lettering is read by OCR programs.

Kurzweil realized that an OCR program could bring considerable benefit for the blind. It could be tweaked so that any sort of document could be scanned into a computer and the computer would then recite the words aloud. Kurzweil had already helped create