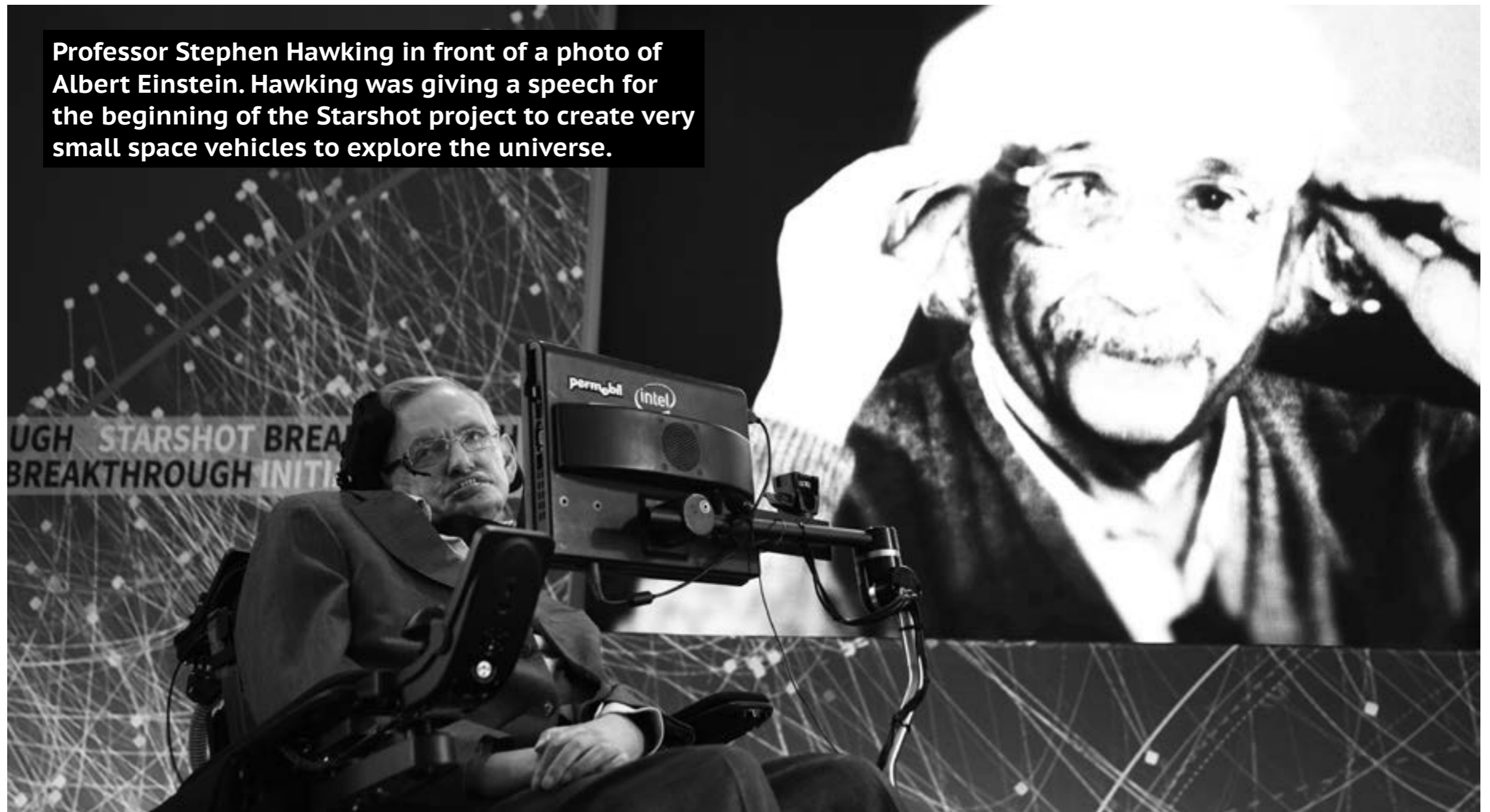


## Stephen Hawking: a Unique Scientist! **B1**

Professor Stephen Hawking in front of a photo of Albert Einstein. Hawking was giving a speech for the beginning of the Starshot project to create very small space vehicles to explore the universe.



**Professor Stephen Hawking who died on 14 March 2018 at the age of 76, was one of the most famous, and most respected, scientists in the world. He made incredible scientific discoveries. Yet he couldn't walk or speak, and communicated using a computer and one muscle in his face.**

Hawking was a physicist and mathematician. He specialised in cosmology, the study of the universe. His most famous theory was about black holes. Most physicists are anonymous experts, working in laboratories. Their theories seem very difficult for ordinary people to understand. Hawking was very rare: a brilliant physicist, respected by the scientific community, who could communicate scientific theory in a way ordinary people understood.

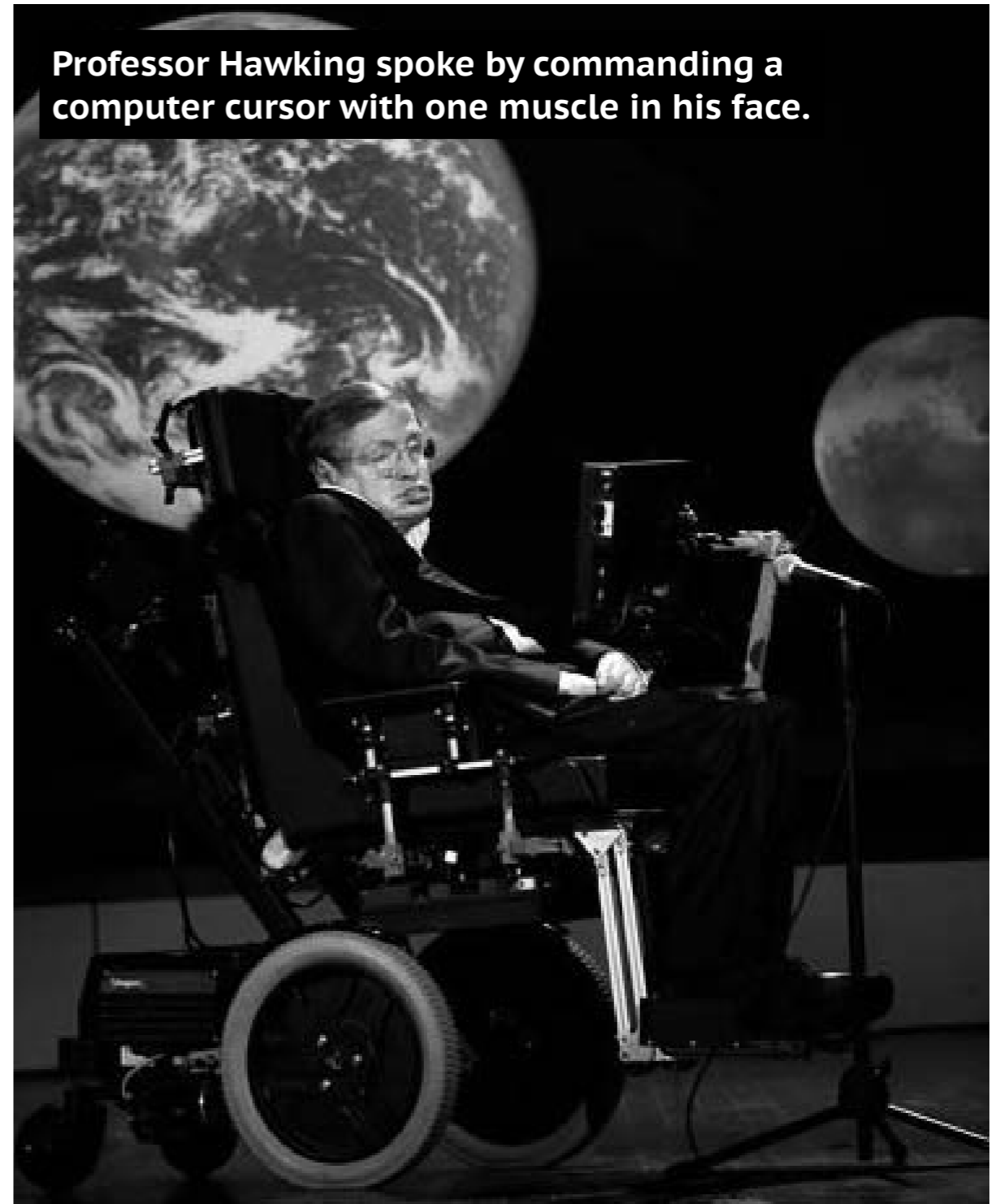
Oh, and he had a super-cool computerised voice.

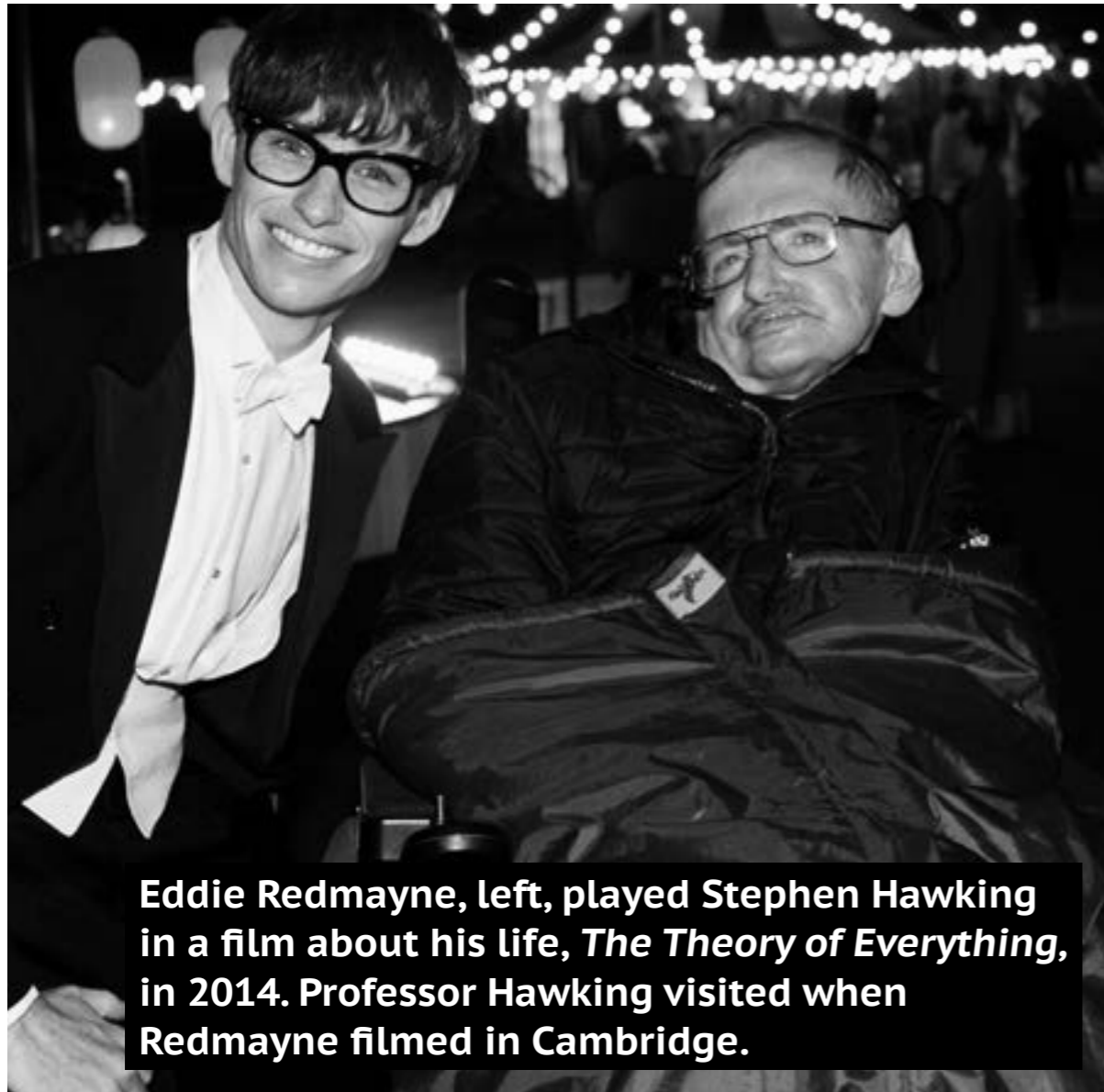
## **Einstein**

Stephen Hawking was born in Oxford, England, on 8 January 1942. At school, his nickname was "Einstein". His friends knew he was good at science but they didn't know how good he was. He studied Physics at Oxford University, and then went to Cambridge University to study for his doctorate in Cosmology.

There, at the age of 22, he was diagnosed with Motor Neurone Disease, a neurological condition. The doctors thought he had two years to live. But Professor Hawking

**Professor Hawking spoke by commanding a computer cursor with one muscle in his face.**





**Eddie Redmayne, left, played Stephen Hawking in a film about his life, *The Theory of Everything*, in 2014. Professor Hawking visited when Redmayne filmed in Cambridge.**

married, had three children, and made major scientific discoveries. He lived not two but 55 years. He was still a Cambridge professor and continued his research until his death. He also helped explain science to non-scientists. His book *A Brief History of Time*, a (relatively) simple guide to cosmology, was a bestseller: 10 million copies!

## Black Holes and the Big Bang

Professor Hawking's work on black holes was a continuation of work by Einstein on relativity and Isaac Newton on gravity. (At just 35, Hawking became the Lucasian Professor of Mathematics at Cambridge, a post that was created for Newton.) His discoveries helped prove the Big Bang theory of the creation of the universe.

## A Unique Voice

Stephen Hawking survived much longer with Motor Neurone Disease than any other patient. But it seriously affected him. He slowly lost the use of almost all his muscles. In 1985, he lost the ability to speak. He learned to choose letters on a computer screen to create words and sentences. A synthetic computer voice then said his words. His communication technology became more sophisticated but he chose to keep the old synthetic voice that is now recognisable all over the world.

Some scientists think that Professor Hawking's disability helped his scientific discoveries: he developed a system to visualise complex concepts because he couldn't write or do experiments. He found new connections and ideas simply by thinking about them. He said himself, "My disability has probably given me more time than most people to pursue the quest for knowledge."



**Professor Hawking dreamed of visiting space so he loved flying in NASA's Zero Gravity plane.**

Professor Hawking spent his professional life studying the stars and space, and he was a big science-fiction fan. He celebrated his 65th birthday discovering zero-gravity in a NASA plane. One of his favourite achievements was appearing on *Star Trek*. And he spent his 75th birthday in typical style: watching *Star Wars Rogue One*!

## Help

**Lucasian** (exp) The post was founded in 1663 by Henry *Lucas*, who was Cambridge University's Member of Parliament 1639-1640.

**disease** (n) a medical condition (cancer, pneumonia, meningitis...)

**achievement** (n) something accomplished (*achieved*) with skill, effort or courage