In 1701, Edmund Halley produced the world's first isogonic chart, which shows how the angle between magnetic north and true north varies at different points in the Atlantic Ocean.
FURTHER DISCOVERIES

Beginning in 1698, with the support of England’s Royal Society and the Admiralty, Edmund Halley, who would later be named the country’s Astronomer Royal, set out on several long expeditions to measure Earth’s magnetic variations across the northern and southern regions of the Atlantic Ocean. This data offered great advantage to the English Navy. In 1701, Halley produced the world’s first isogonic chart, which shows how the angle between magnetic north and true north varies at different points in the Atlantic Ocean [see photo].

The study of magnetism set the stage for work in electrostatics. And the compass also served as a scientific instrument. With it, Danish physicist Hans Christian Ørsted observed in 1820 that an electric current from a battery flowing through a wire produced a magnetic field. This important discovery in electromagnetism paved the way for telegraphy.

In 1831, English scientist Michael Faraday showed that moving a conductor in a magnetic field produced an electric current, leading to advances in electric power generation. James Maxwell (http://theinstitute.ieee.org/technology-focus/technology-history/did-you-know-someone-else-wrote-maxwells-equations) combined the electric and magnetic phenomena in a set of elegant field equations. Heinrich Hertz’s discovery of radio waves, a type of electromagnetic radiation, set the stage for wireless telecommunications. This great chain of discoveries and inventions was set in motion by the seafarer’s compass, the tool that made it possible to voyage across Earth’s inhospitable seas.

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