

Oliver Heaviside and the Technological Roots of “Maxwell’s Equations”

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This year marks the 150th anniversary of the James Clerk Maxwell’s publication of his theory of the electromagnetic field, in his 1861–62 paper “On Physical Lines of Force.” But one will not find there the familiar set of four vector equations now known as “Maxwell’s Equations.” Those equations have instead been drawn from papers the English electrical engineer Oliver Heaviside published in the mid-1880s. Heaviside’s version of Maxwell’s theory had deep roots in the British telegraph industry of the late 19th century, and examination of how Heaviside came to take up and transform Maxwell’s work will shed light on important questions concerning the relationship between science and technology.