Herman H. Hollerith

Born February 20, 1860, Buffalo, N. Y; died November 17, 1929, Washington, D. C.; inventor of the punched card which bears his name and the associated machinery for use in the 1890 US census; founder of the company (Hollerith Tabulating Company) that eventually became IBM.



Education: graduate, School of Mines, Columbia University, 1879; PhD, Columbia University, 1890.

Professional Experience: statistician, US Bureau of the Census, 1879-1882; instructor, MIT, 1882-1883; US Patent Office, 1883-1886; self-employed, 1886-1929.

Herman Hollerith was born in 1860 in Buffalo, N.Y, and graduated at the age of 19 from the Columbia School of Mines. His supervisor, William P. Trowbridge, who was a consultant to the US Bureau of the Census, introduced Hollerith to John Shaw Billings, who employed him as an assistant in his work on the statistical analysis of the

1880 census. Billings remarked that there ought to some way to mechanize the tabulating process. Following this early involvement with the bureau, Hollerith moved to MIT¹ in 1882 with Francis Walker, who had served as the director of the bureau, and where Hollerith developed a flair for invention. A year later he returned to Washington to become an examiner for the Patent Office. During this period at MIT he developed the basic ideas of the tabulating machine, using rolls of perforated paper tape as the means of input. Replacing the continuous tape by cards, Hollerith also developed a pantograph punch for preparing the data on the cards, and a "reader" in which spring loaded pins completed electrical circuits to increment selected counters in the tabulator. In response to a request for bids to automate the tabulation of the data collected during the 1890 census with the hope of completing the analysis of the data before the 1900 census even in the face of an increased number of questions, Hollerith proposed his card processing system. The new system proved to be a success, and the time to completion of the data analysis was reduced to one third of that for the hand-counted 1880 census. A repeat performance in 1900 confirmed the efficacy of the system by reducing the time to process to one quarter of the previous census and cutting labor costs considerably.

In the meantime, Hollerith's system was purchased for use in several European census activities, and he formed a company, the Tabulating Machine Company, to service these opportunities. The company eventually merged with others and, under the direction of T. J. Watson, in 1924, became "International Business Machines Corporation," or IBM.

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¹ Then called the Boston Institute of Technology and not yet moved across the river to Cambridge.

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UPDATES

New Portrait added (MRW, 2013)