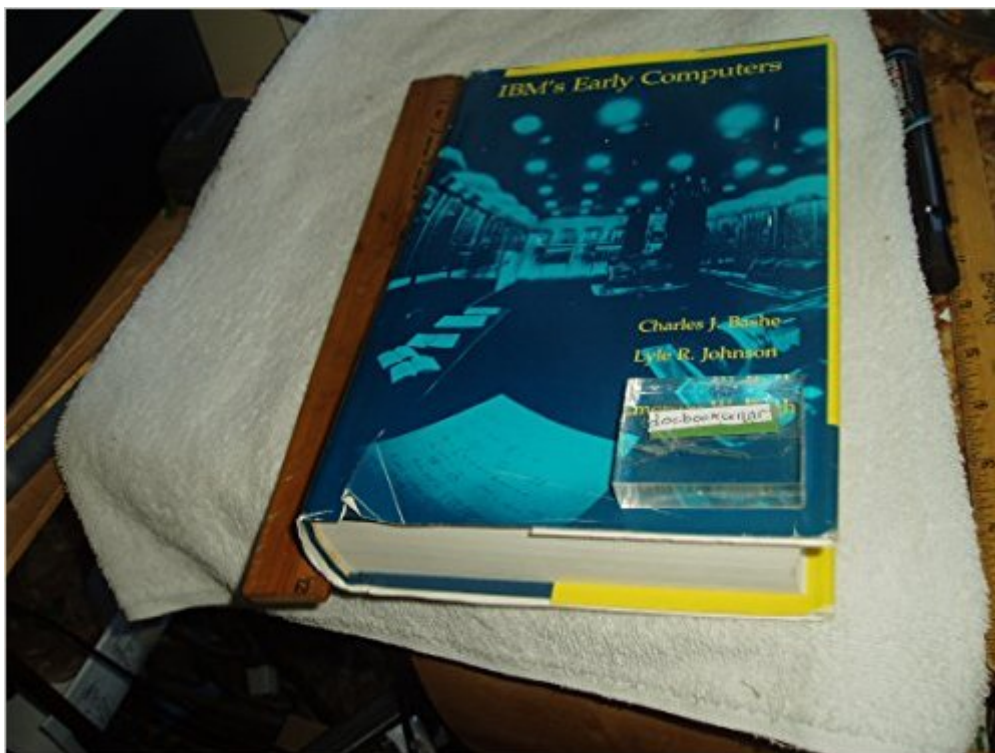# IBM's Early Computers (History Of Computing)

Synopsis

In describing the technical experiences of one company from the beginning of the computer era, this book unfolds the challenges that IBM's research and development laboratories faced, the technological paths they chose, and how these choices affected the company and the computer industry. It chronicles the transformation of IBM into a computer company in a remarkably few years, discussing projects that ended in frustration as well as the more successful ones, and providing a sense of the atmosphere, the people, and the decision-making processes involved during the company's rapid technological transformation. IBM's Early Computers is a unique contribution to the modern history of computers. It focuses on engineering alternatives rather than business and general management considerations and reveals the significance of imaginative solutions to problems in design and technology, from initial experiments with electronics in digital machines to the threshold of the System 360 era. This fair and balanced account of IBM's role in shaping today's electronic revolution identifies the individuals (both inside and outside the company) whose pioneering work influenced developments at IBM. The book's fourteen chapters briefly survey the card machine era and then cover electronic calculation, the magnetic drum calculator, the Defense Calculator and other first-generation products, ferrite core memories, magnetic tape, and disk storage development, programming, transistors, "Project Stretch" (which involved disappointments but led to one of IBM's greatest successes) high-speed printers, research, and new-product-line considerations. IBM's Early Computers is included in the History of Computing Series, edited by I. Bernard Cohen and William Aspray.

Book Information

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Customer Reviews

This is primarily a technical history of IBM's early computers. It begins with the successors to Herman Hollerith's tabulating machine -- punched card accounting machines -- and ends with the announcement of the IBM/360 series.But in addition to a relatively detailed description of some of the engineering behind IBM's early computers, it also provides a view of how that engineering was affected by the politics of a large corporation and the needs of its customers.The authors are all long-time staff of IBM and participants in this early history. To their credit (and IBM's), they show both the muddle and the genius involved: how IBM wound up both at the head of the pack and with a set of incompatible products by 1960.The technologies involved are all 50 years or more out of date. However, if you plan to spend time working as an engineer or manager in a technical firm, then reading this book carefully, along with the works of Frederick Brooks, Samuel Florman, Robert Lucky, and Henry Petroski, might offer as good an education as many MBA programs.(See our Amapedia article for details on publication history, author background, and content notes.)

Just finished reading *IBM's Early Computers* and I'm sad to have it come to an end. What an epic struggle! From census tabulators in the 20's to playing catch-up with UNIVAC, to building the giant SAGE air defense computers, to making point contact transistors by breaking open diodes, to implementing the pioneering and massive SABRE airline reservations system. (That was a pair of 7090 solid-state mega-computers, running in tandem and serving thousands of terminals in real time.) Stops just short of the revolutionary IBM-360 systems but outlines where they were going with that effort. (I just ordered *IBM's 360 and Early 370 Systems* which is in the same MIT Press series.)It's a fascinating story of how the elephant learned to dance. Reads like a historical novel, yet is written with a lot of meaty detail on the technical aspects of the engineering challenges. (You'll get the most out of it, if you're technically inclined.) At times, it was a struggle of engineering versus the sales suits. Begins in the twenties, when IBM (under another name) made punched-card machines. The surprising thing was how much computing, organizations were able to do without computers. By the late forties, card machines could do arithmetic and multiple-step operations, under the control of plug-boards. When general purpose computers were proposed, sales and marketing declared that there was no market for them and that customers would never pay the higher monthly rentals required!In just ten short years, IBM went from being an electromechanical

machine maker to a pioneer in state-of-the-art electronics. The management and engineering effort it took to do that on the massive scale of their company was nothing short of Herculean. In spite of being written by people who were actually there, this is no puff-piece. Tells of the failures, along with the triumphs. Meticulously documented, with over 80-pages of footnotes, this is truly a magnum opus!

I've had this book a few days now and am thoroughly enjoying it. So far, I've read through the chapters on electromechanical devices, and the early drum and tape calculators. Fascinating, the more so because I didn't previously know that I cared - I bought this because I'm interested in 'proper' (my programmer bias is showing) stored-program computers, particularly the 7094 and Stretch. So far, there's plenty of technical detail.I have one tiny gripe: the paperback is not very high quality considering its price. The layout looks like a cheap pulp novel only with about 0.5" of margin. There's a consistent blur to 2 or 3 lines two-thirds of the way down the page. At first I thought it might have been one of those print-on-demand editions, but the front matter seems to indicate otherwise. Still, though I wish it were better produced, I don't regret the purchase.

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