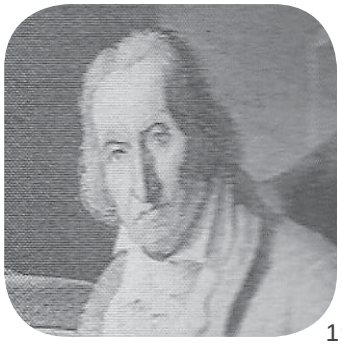
A Connection to the Machine

Bates weave shed #5 was designed specifically to house a machine called the Jacquard loom. These machines used punch cards to translate weaving patterns into loom controls. A succession of inventors from Jacquard to our present era delivered the modern computer and its budding extension, the supercomputer.

By considering the historical connection to weaving and computing new programmatic and design ideas emerge.



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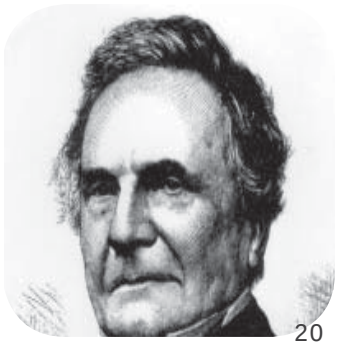

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Joseph Marie Jacquard develops the first punch-card machine. The cards act in a system that governs the action of individual needles that control the actions of a looms warp. The invention increased the speed of weaving twenty-four fold!

1801

1822

Charles Babbage develops the “Difference Engine” concept.

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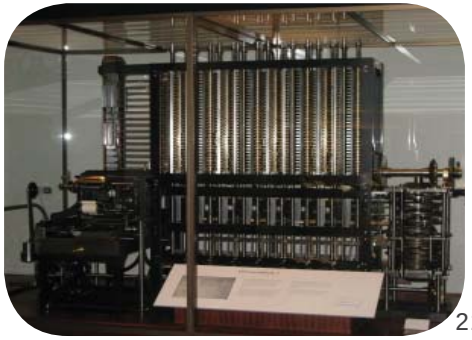

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Herman Hollerith, an American inventor, uses his tabulating machine to process the 1880 census data. Hollerith used punched cards in his tabulating machine. These later became refined and came to be known as “IBM cards”, or simply “punch cards.”

Thomas J. Watson, Sr., is hired as president of CTR company. CRT later becomes IBM.

J. Bardeen and W. H. Brattain invent the transistor at Bell Telephone Laboratories.

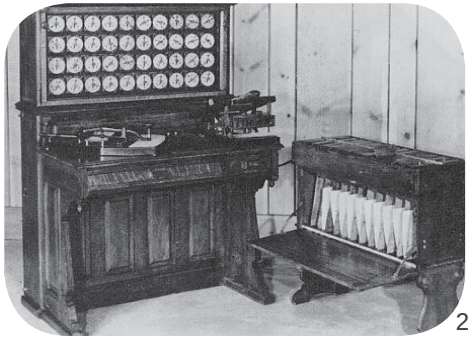
Gordon Teal, a physicist who had moved from Bell Labs to Texas Instruments, develops the silicon-based junction transistor.

1880 1914 1937 1946 1947 1954 2008

Howard Aiken takes his idea for an electromechanical computer to Thomas Watson, Sr. of IBM. Aiken begins design work on the MARK I automatic digital computer.

John P. Eckert and John Mauchly develop the ENIAC. The ENIAC contained over 18,000 vacuum tubes and programs had to be physically wired into the computer.

University of Illinois to build IBM Blue Water, a supercomputer believed capable of a petaflop - one thousand trillion operations per second.



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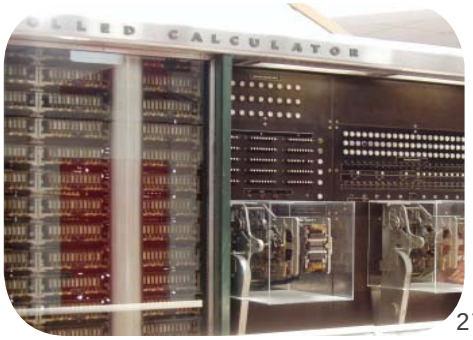

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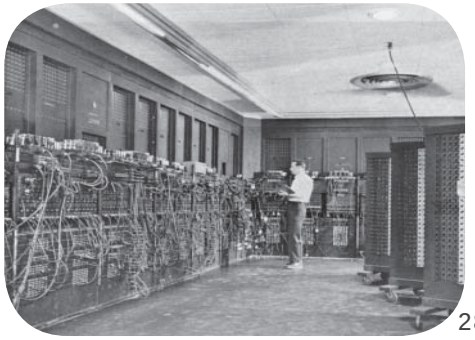

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