50 Years of Computing
Towards Embedded Ubiquitous Computers

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June 2009
You Can’t Escape Computers

- iPhone
- Laser Keyboard
- Nikon D300
- Video Watch
- GPS
- Playstation 3
- PC Keyboard
- SD Card
Moore’s Law: Transistors per chip

“The complexity for minimum component costs has increased at a rate of roughly a factor of two per year. Certainly over the short term this rate can be expected to continue, if not to increase.”

— Gordon Moore, 1965

Source: Intel/Wikipedia
$1000$ buys this many cycles per second

Electromechanical Relay
Tube Transistor
Integrated Circuit

Source: Ray Kurzweil, *The Age of Spiritual Machines*
Cray-1
1976
$7.9M (= $25M in 2009)
200,000 gates
80 MHz
8 MB
160 MIPS
5.5 tons
115 kW

Sheeva plug
2009
$99
50,000,000? gates
1.2 GHz
512 MB
1000 MIPS
4” × 3” × 2”
19 W
Home Motor.

This motor, as shown above, will operate a sewing machine. Easily attached; makes sewing a pleasure. The many attachments shown on this page may be operated by this motor and help to lighten the burden of the home. Operates on usual city current of 105 to 115 volts. Shipping weight, about 5 pounds.

No. 57F7564 Price, complete, as shown.................. $8.75

Booster Attachment.
Whips cream and beats eggs, and many other items will be found for these attachments when used in connection with the Home Motor. Parts include: the stand, handle and the beater. Shipping weight, about 14 ounces.
No. 57F7563 Price........... $1.30

Churn and Mixer Attachment.
Used in connection with the Home Motor, makes a small churn and mixer for which you will find many uses. The attachments include the base, supports, mixer, handle and spout cover for jar. Shipping weight, about 25 pounds.
No. 57F7562 Price........... $1.30

Fan Attachment.
Includes fan and pulley which can be quickly attached to Home Motor, and will be a great comfort in hot weather. Shipping weight, about 14 ounces.
No. 57F6215 Price........... $1.30

About $100 in today's dollars.

Spot the Computer