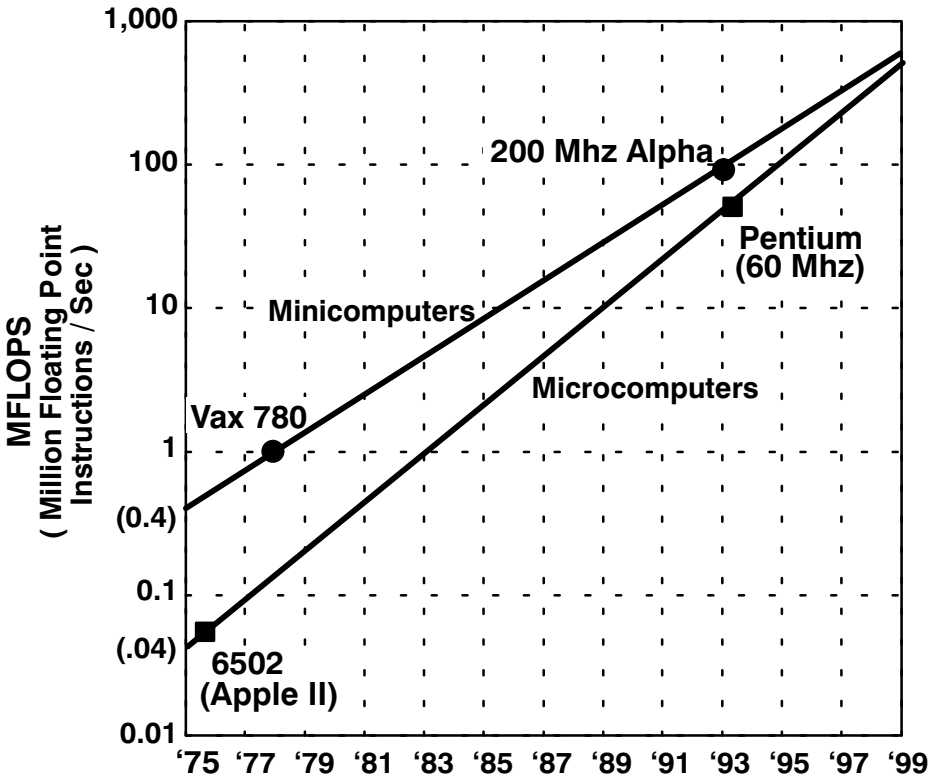
COMPUTING POWER IS SOARING AS IS COMMERCIAL COMMUNICATIONS – BUT NOT FIGHTING ECHELON COMMS.

CPU PERFORMANCE



Slope of Microcomputer Performance Graph follows that for supercomputers: 47% Long–Term Growth Rate.

From: Hardenbergh, H.W. "CPU Performance, Where Are We Headed," Dr. Dobb's Journal, Jan 94.

RULES OF THUMB – EVERY:

1.5	*Years*	*– CPU Performance DOUBLES*
2	*Years*	*– Memory Capacity DOUBLES*
5	*Years*	*– Data–bus Width DOUBLES*
7	*Years*	*– Feature Size HALVES*
7	*Years*	*– Chip Speed DOUBLES*

COMMUNICATION BIT RATES :

Commercial Systems Wire or Fiber Optics		
OC–48	2.5 X 10^9	(2.5 Gbps)
OC–12	6.22 X 10^8	(622 Mbps)
OC–3	1.55 X 10^8	(155 Mbps)
FDDI	1.00 X 10^8	(100 Mbps)
T–3	4.5 X 10^7	(45 Mbps)
Ethernet	1.0 X 10^7	(10 Mbps)
T–1	1.5 X 10^6	(1.54 Mbps)
Arpanet/DDN	5.6 X 10^4	(56 Kbps)
SINCGARS (Data)	9.6 X 10^3	(9600 bps)
SINCGARS (Best)	3.8 X 10^3	(3840 bps)

SINCGARS: "Best Case" Calculation:
CSMA Protocol: < 40% Utilization
.4 X 9600 bps = 3840 bps