

Storage Trends

SRAM

| metric | 1980 | 1985 | 1990 | 1995 | 2000 | 2000:1980 |
|-------------|--------|-------|------|------|------|-----------|
| \$/MB | 19,200 | 2,900 | 320 | 256 | 100 | 190 |
| access (ns) | 300 | 150 | 35 | 15 | 2 | 100 |

DRAM

| metric | 1980 | 1985 | 1990 | 1995 | 2000 | 2000:1980 |
|------------------|-------|-------|------|------|------|-----------|
| \$/MB | 8,000 | 880 | 100 | 30 | 1 | 8,000 |
| access (ns) | 375 | 200 | 100 | 70 | 60 | 6 |
| typical size(MB) | 0.064 | 0.256 | 4 | 16 | 64 | 1,000 |

Disk

| metric | 1980 | 1985 | 1990 | 1995 | 2000 | 2000:1980 |
|------------------|------|------|------|-------|-------|-----------|
| \$/MB | 500 | 100 | 8 | 0.30 | 0.05 | 10,000 |
| access (ms) | 87 | 75 | 28 | 10 | 8 | 11 |
| typical size(MB) | 1 | 10 | 160 | 1,000 | 9,000 | 9,000 |

(Culled from back issues of Byte and PC Magazine)

15-213, F'02

CPU Clock Rates

| | 1980 | 1985 | 1990 | 1995 | 2000 | <i>2000:1980</i> |
|-----------------|-------|------|------|------|-------|------------------|
| processor | 8080 | 286 | 386 | Pent | P-III | |
| clock rate(MHz) | 1 | 6 | 20 | 150 | 750 | 750 |
| cycle time(ns) | 1,000 | 166 | 50 | 6 | 1.6 | 750 |

The CPU-Memory Gap

The increasing gap between DRAM, disk, and CPU speeds.

