Laboratory 3: Computer Memory Benchmark

Computer Memory

Our PCs have multitasking operating systems (OSX, Windows7, Linux, …) Which require enough RAM to simultaneously handle all of the data and programs to fit in memory without resorting to using paging space on the hard drive as Virtual Memory. Once paging starts, the computer is slowed.

Benchmarking a PC

You need to first establish how well your PC performs with a minimal amount of installed RAM. This requires you to check the installed RAM and remove (or add) some to have 1 Gigabyte to start.

The first benchmark is simple; record the time to boot your PC.

Now download and run a memory intensive graphics benchmark:

> http://homepage.virgin.net/roy.longbottom/index.htm#anchorBMPSpd

> Note: Start at a reasonable largest size graphic and increase it until your system gets noticeably slow. Too large a graphic can crash the test.

Repeat the tests with added RAM.

Other useful free benchmarking packages are:

> http://novabench.com/download.php

> http://www.futuremark.com/download/3dmark05/

> MatLab: bench.m

Benchmark Report

We have examined the performance of a desktop computer in class as a function of installed memory size. Your report is discuss your benchmark results and the efficacy of adding memory to your personal computer and how much memory you need to be satisfied with your PC's performance.