

COMPUTER SCIENCE

Mach Makes Its Mark in Operating Systems Classes *Simon Fraser University*

When the School of Computing Science at Simon Fraser University (SFU) in Burnaby, British Columbia, decided to upgrade the instructional computing facilities, the faculty wanted a machine with a superior operating systems environment. The school considered several UNIX machines and eventually decided to purchase 29 NeXT computers.

^aNeXT addressed more of the items on our wish list,^o says Eric Kolotyluk, manager of Research and Education Systems. ^aWe were getting a workstation environment at PC prices and Macintosh ease of use in a `real' operating system environment.^o

One of the primary reasons SFU decided on NeXT was its Mach operating system. Says Kolotyluk, ^aWe felt we could take the classes further by giving students hands-on experience with Mach. It's one of the ^orst new `real' operating systems to come out in a very long time and the only serious contender to contemporary UNIX systems. We had been teaching standard UNIX, but that's like teaching history. The current trend is toward micro-kernel technology, which is what Mach is based on. In addition, Mach has some incredibly elegant features.^o

SFU uses NeXT machines in three of its operating systems courses: Introduction to Operating Systems, Advanced Operating Systems, and a graduate course in operating systems design. Plans are to move the Operating Systems Implementation course from a PC environment to the new NeXT computers. The school also uses the NeXT machines to teach courses on LISP and Prolog, as well as constraint-based logic programming using SFU's new Echidna expert system shell. In addition, the school plans to create a new course in graphical user interface design using Interface Builder.

^aNeXT has the usability of a Macintosh system and the power of a UNIX system,^o says Kolotyluk. ^aOther systems may have more software and applications, but they are typically more difficult to use. NeXT machines have also proven to be more reliable under the stresses of O/S students who typically write systems level code that gets out of hand and causes other systems to crash. NeXT is just a nicer, cleaner, smoother, more reliable environment.^o

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