

CS 308 - Fall 1998

VLIW Machines - an Update.

Turns out that the newest Intel - Hewlett-Packard processor will be a VLIW machine. This is the IA-64, which is to be a 64-bit processor which will implement both the Intel 80x86 ISA and the HP architecture. Quoting from a new article in Computer (vol. 31, no. 11, November 1998) by Kozyrakis and Patterson.....

“IA-64 can be considered a recent commercial reincarnation of architectures based on the very long instruction word (VLIW), now renamed *explicitly parallel instruction computing*. Based on the information announced thus far, its major innovations are the instruction dependence information attached to each long instruction and the support for bundling multiple long instructions. These changes attack the problem of scaling and low code density that often accompanied older VLIW machines. IA-64 also includes hardware checks for hazards and interlocks, which helps maintain binary compatibility across chip generations. Finally, it supports predicated execution through general-purpose predication registers, which reduces control hazards.”