

Get ready for GNU software

Free Software Foundation has created a suite of giveaway programs

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SPECIAL TO CW

To Richard M. Stallman, one of the world's most prolific programmers, proprietary software has put millions of people in a dilemma. As computer users, we are routinely faced with the choice of becoming criminals by making copies of programs for friends or being bad neighbors by refusing to make copies.

Six years ago, Stallman set out to change that situation. "My fundamental motivation," he says, "was to be part of a software sharing community in which people can give copies of programs to their friends without having to hide it and without having to be sneaky. I decided that I was going to do it even if I had to write all the software myself."

What might have been an unthinkable task for others has been a mere matter of coding for Stallman, who by many accounts may be the world's best programmer. He set out to create an entire suite of computer programs — word processing packages, spreadsheets, compilers, debuggers and the like — and an operating system on which it

would run. He modeled his project on the Unix operating system and called it GNU, a tail-chasing acronym for Gnu's Not Unix.

Stallman's first program, a powerful text editor called GNU Emacs, is becoming the standard Unix programmer's editor. GNU Emacs runs on more than 50 different computer systems, and anyone with a copy of it can give one to anyone else.

Stallman, now president of the Free Software Foundation in Cambridge, Mass., coordinates seven paid programmers and more than 200 volunteers across the country. Other paid employees write documentation and fill orders for manuals and tapes. The foundation earned \$330,000 in 1989 and received \$267,000 in gifts from companies and individuals. Last month, Stallman was awarded a \$240,000 "Genius Grant" from the MacArthur Foundation.

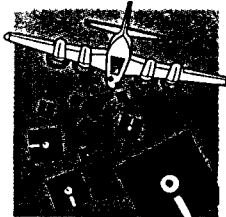
Stallman's second program, the GNU C Compiler (GCC), has been ported to more than 13 microprocessors. In many cases, it generates code that is faster and more compact than the out-

put of compilers that cost thousands of dollars. GCC comes with workstations sold by Data General Corp. and Next, Inc., while Lotus Development Corp. uses it to compile its Unix-based applications.

Firms use free software because it is better than the commercially available programs it replaces. Because users have the source code, they can isolate and repair bugs themselves. Fixes are incorporated into the master sources at the foundation and are made available over computer networks. The programs are brimming with features and options added by thousands of programmers from all around the world.

Nevertheless, many firms are hesitant to use free software because of one concern: support. The Free Software Foundation has no telephone support lines, no customer applications engineers and no accountability to its customers. The programs come as source code; customers must compile and install the programs for themselves.

Stallman and others do answer questions and fix bugs, gen-



erally faster than their commercial competition, and the foundation distributes a list of more than 50 consultants who have made GNU software a speciality. For years, Stallman has maintained that as soon as his software becomes popular, firms will be started up to support it.

One such company has already appeared — Cygnus Support in Palo Alto, Calif. The company is headed by Michael Tiemann, author of G++, which is the GNU compiler for the object-oriented C++ programming language. Tiemann says that his company will "satisfy the need that free software is generating."

Like GNU software in general, customers can use a Cygnus program on machines from a multitude of manufacturers. They can also redistribute it without paying royalties or signing licensing agreements. In its first quarter, Cygnus wrote \$200,000 worth of support contracts.

Meanwhile, back in Cambridge, Stallman and his band of programmers press on. Programs currently under development include an X Window System-based spreadsheet and a symbolic math system. The group expects to turn out an entire Mach-based operating system for IBM machines based on Intel Corp.'s 80386 and for Sun Microsystems, Inc. workstations before the end of next year.

One thing that might put a

dampener on the GNU project is the increasing prevalence of software patents. Since the mid-1980s, the federal government has been granting patents on computer algorithms. Last year, Refac Technology Development Corp. in New York filed suit against Lotus and several other spreadsheet vendors, claiming that their best-selling programs infringe on a patent Refac purchased.

"We are asking what is considered a reasonable royalty: 5% on the net selling price," Refac Chairman Eugene Lang says.

While such patents present problems for all software developers, they could pose an insurmountable barrier to developers such as Stallman who want their programs freely distributed and thus could not pay royalties.

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