

Social Responsibility and the CS Student

How Can I Get Involved?

by [Saul Jimenez](#)

Much of computer science (CS) education teaches us how to design, build, and maintain efficient and effective hardware and software. By the time we graduate, we know more about computers and computing than most people would care to know. Unfortunately, computers do not exist in their own world. Often they are part of an information system that is in turn part of a political, business or social organization. CS students and professionals are in a unique position because they can have strong input on the design and implementation of computer systems and policies that affect millions, if not billions, of lives. Given the importance and pervasiveness of Information Technology (IT), what can CS students and professionals do to make sure IT is being used appropriately? This article will describe several organizations that address the sometimes conflicting issues that occur when a new tool is introduced to society. Most of these organizations are volunteer run: in return for help, they offer a way to meet people with similar interests and learn something along the way.

As background for this issue of involving computer professionals in work towards social change, the interested reader can read two articles. The first, "Human Values and the Future of Technology: A Declaration of Responsibility", written by Ben Schneiderman, describes a number of steps individual CS students and professionals can take when developing their products. The article also clearly articulates many issues developers themselves should consider when producing their product. The second article, "Towards A Guide To Social Action For Computing Professional", written by Jeff Johnson and Evelyn Pine, describes the proceedings of the social issues session at CHI '92. This paper is the beginning of a Social Action Guide developed by Computer Professional for Social Responsibility (CPSR). For those of us who like pictures in our reading material, almost every issue of [Wired](#) magazine includes some articles on computing social issues amidst the ads for internet access and games.

Computer Professionals for Social Responsibility

The mission of CPSR is to provide the public and policymakers with realistic assessments of the power, promise, and problems of information technology. As concerned citizens, CPSR members work to direct public attention to critical choices concerning the applications of information technology and how those choices affect society.

CPSR is a democratically organized grass roots alliance. Our accomplishments are the result of the member activism. Many CPSR members serve as national organizers.

-- From the [CPSR Mission Statement](#)

The idea of Computer Professionals for Social Responsibility was discussed in 1981 by Dan Ingalls, Alan Borning, Laura Gould and Severo Ornstien. By 1983 it was an official non-profit organization. The principle focus for the first years was raising awareness about the proliferation nuclear weapons and, specifically, the Strategic Defense Initiative (SDI). SDI was an appropriate focus because it relied on software to launch nuclear missiles. Because the software would include about a million lines of code, reliability was a central issue of both CS professionals and the general public. The topic of arms was so central to CPSR that the executive director, Gary Chapman, co-edited (with David Bellin) CPSR's first book called *Computers in Battle: Will They Work?*

In 1986, CPSR started to add additional projects to its agenda. Not coincidentally the impetus came from local chapter members; in the four years since its inception there were already 12 chapters. The two topics were civil liberties and privacy, as well as, computers in the workplace. Over the years these [key areas](#) have grown to five, including the National Information Infrastructure (NII), technology and human needs, and reliability and risk of computer-based systems. These projects were selected based on the following five principles of CPSR:

1. We foster and support public discussion of, and meaningful involvement in, decisions critical to society.
2. We work to correct misinformation while providing understandable and factual analyses about the impact of societal technology.
3. We challenge the assumption that technology alone can solve political and social problems.
4. We critically examine social and technical issues within the computer profession, both nationally and internationally.
5. We encourage the use of information technology to improve the quality of life.

-- From the CPSR Mission Statement

CPSR also has national working groups and local chapters that explore diverse issues such as development of nanotechnology, virtual reality, computer science education, working conditions for computer professionals, community networks and computer ethics.

How Can I Get Involved?

“CPSR welcomes everyone who uses or is concerned about the role of information technology in our society.” CPSR members receive many benefits including a quarterly newsletter containing in-depth analysis of major issues as well as updates on CPSR activities and action alerts, the opportunity to work with a network of people who can provide expertise and well-researched support for progressive positions concerning information technology policy, and discounts on CPSR events and publications. I

also understand that each local chapter has at least one really good party each year.

CPSR National Office

P.O. Box 717

Palo Alto, CA 94301

415-322-3778 (Voice) 415-322-4748 (FAX)

email: cpsr@cpsr.org

<http://cpsr.org/home>

Student membership \$20 .00

The Electronic Frontier Foundation

A new world is arising in the vast web of digital, electronic media which connect us. Computer-based communication media like electronic mail and computer conferencing are becoming the basis of new forms of community. [Without a single, fixed geographical location, these communities comprise the first settlements on an electronic frontier.]

While well-established legal principles and cultural norms give structure and coherence to uses of conventional media like newspapers, books, and telephones, the new digital media do not so easily fit into existing frameworks. Conflicts come about as the law struggles to define its application in a context where fundamental notions of speech, property, and place take profoundly new forms. People sense both the promise and the threat inherent in new computer and communications technologies, even as they struggle to master or simply cope with them in the workplace and the home.

-- From the **EFF Mission Statement**

The Electronic Frontier Foundation (EFF), founded in 1990, is an organization that primarily deals with privacy and policy issues. It was founded by John Perry Barlow (a former rancher and songwriter for the Grateful Dead) and Mitch Kapor (founder of Lotus Development Corporation). Early contributors and board members included Steve Wozniak (from Apple), John Gilmore (from Sun Microsystems) and Stewart Brand (Publisher of Whole Earth Review). Mr. Barlow is the highest profile of the board because of his presence in literature as varied as the Utne Reader and Communications of the ACM (CACM). His articles are humorous, informative and sometimes poignant: they are a good diversion from regular work but relevant enough that you don't feel too guilty about slacking. Some of the articles are concerned with educating the reader about instances where law enforcement and law makers have tried to bypass our constitutional rights in an effort to try to appease special interest groups. Other articles are concerned with community in cyberspace and other socio/political issues. The range of topics on which Mr. Barlow writes gives the reader a hint of the broad range of issues that the EFF attempts to address. In an effort to resolve those issues the goals of the EFF are to:

1. Engage in and support educational activities which increase popular understanding of the opportunities and challenges posed by developments in computing and telecommunications.
2. Develop among policy-makers a better understanding of the issues underlying free and open telecommunications, and support the creation of legal and structural approaches which will ease the assimilation of these new technologies by society.
3. Raise public awareness about civil liberties issues arising from the rapid advancement in the area of new computer-based communications media. Support litigation in the public interest to preserve, protect, and extend First Amendment rights within the realm of computing and telecommunications technology.
4. Encourage and support the development of new tools which will endow non-technical users with full and easy access to computer-based telecommunications.

-- From the EFF Mission Statement

In today's political climate of negative campaigning and media blitzes, it is hard to tell the good guys from the bad guys without a program. The EFF is just such a program. Their main mission is to educate a population that is not only unaware of the issues and choices available but also most vulnerable to the consequences of biased or misinformed law enforcement.

How Can I Get Involved?

The EFF is different from CPSR in its scope and depth of organization. While there are not any local chapters, an EFF member remains active by staying informed and making his or her opinion known through the various avenues provided by EFF. Membership dues include a subscription to a quarterly hard copy newsletter (Networks & Policy), a subscription to a biweekly electronic newsletter (EFFector_Online) and online bulletins that will keep you informed about the key legal, legislative, and policy issues.

Electronic Frontier Foundation

1667 K St. NW, Suite 801,
Washington DC 20006-1605
202-861-7700 (voice) 202-861-1258 (fax)
email: ask@eff.org
<http://www.eff.org/>

Student memberships: \$20.00

Free Software Foundation

The Free Software Foundation is dedicated to eliminating restrictions on people's right to use, copy, modify, and redistribute computer programs. We promote the development and

use of free software in all areas using computers. Specifically, we are putting together a complete, integrated software system named ``GNU" (``GNU's Not Unix", pronounced ``guh-new") that will be upwardly compatible with Unix. Most parts of this system are already being used and distributed.

The word ``free" in our name refers to freedom, not price. You may or may not pay money to get GNU software, but regardless you have two specific freedoms once you get it: first, the freedom to copy a program and give it away to your friends and co-workers; and second, the freedom to change a program as you wish, by having full access to source code. You can study the source and learn how such programs are written. You may then be able to port it, improve it, and share your changes with others. If you redistribute GNU software you may charge a distribution fee or give it away.

-- From the [**FSF Bulletin**](#)

While both CPSR and EFF are organizations that can appeal to people outside CS, FSF is the ultimate propeller head's socially oriented CS organization. FSF, founded by Richard M. Stallman, is mostly a collection of people who write and document code for a noble cause. That cause is no less compelling than supplying a free and complete software system which includes an operating system (OS), a window environment, a developers environment, text processors and, most importantly, games. At this time GNU is developing a new OS called the [**Hurd**](#) which ``is built on top of CMU's Mach 3.0 kernel and uses Mach's virtual memory management and message-passing facilities... The Hurd is designed to make the area of system code as limited as possible." This architecture will allow additions to the system to be made more easily. The Hurd will be the cornerstone of the GNU system and will be upwardly compatible with UNIX.

The architecture of the Hurd is a manifestation of the [**FSF copyleft**](#). In contrast to copyright, copyleft preserves the freedom of a group of software users and developers rather than just protecting the authors of the software. ``It is a legal instrument that requires those who pass on a program to include the rights to use, modify, and redistribute the code; the code and rights become legally inseparable." The copyleft used by the GNU Project is made from the combination of a regular copyright notice and the ``GNU General Public License" (GPL). In addition, FSF encourages you to copyleft you own programs and can show you how to do it.

FSF/GNU products are varied and plentiful. The following is a very abbreviated list of [**GNU products available now:**](#)

acm

A LAN-oriented, multiplayer aerial combat simulation that runs under X Windows

BASH

Bourne Again SHell

GNU Chess

A program that plays chess with you

CLISP

A Common Lisp implementation

DejaGnu

A framework for testing other programs that provides a single front end for all tests

elvis

A clone of the `vi'^ex' Unix editor

GNU Emacs

An extensible, customizable real-time display editor

Fontutils

Creates fonts for use with Ghostscript or TeX

GAS

The GNU assembler

GCC

A compiler supports three languages: C, C++ and Objective C

Linux

A Unix clone which runs primarily on 386/486/586 machines. Support for 68000, Alpha, and MIPS processors are at various stages of development.

Demacs

GNU Emacs for MS-DOS

How Can I Get Involved?

FSF and the [*GNU Project can use you*](#) in the following ways:

1. Help write programs and documentation. Send mail to `gnu@prep.ai.mit.edu' for the task list and coding standards.
2. Build binaries for systems not yet on the Compile Tools Binaries CD-ROM
3. Sponsoring or hosting research assistants to do GNU development, with FSF support.
4. Donate, build etc. Speech and character recognition software and systems (if the devices aren't too weird), with the device drivers if possible. This would help the productivity of partially disabled people (including a few we know).
5. Money. If you use and appreciate GNU software, please send a donation.

Free Software Foundation, Inc.

675 Massachusetts Avenue

Cambridge, MA 02139-3309

617-876-3296 (voice) 617-492-9057 (fax)

email: gnu@prep.ai.mit.edu

http://info.desy.de/gnu/www/gnu_bulletin_9401/gnu_bulletin_9401_toc.html

No membership, just use and buy their products. Gnu's Bulletin is available twice a year, for a SASE (\$0.52), a #10 envelope and copy costs.

The Morino Institute

The Morino Institute is dedicated to helping individuals and communities work toward social change through the power of information and the potential of electronic communications. Electronic communications are already changing our society by dramatically enhancing our ability to interact with each other and reach new sources of information. The Institute's work is to educate local communities in ways they can use information and electronic communications as a force for positive social change -- so that they can more readily address community needs like economic growth, advancing education and improving access to healthcare information.

-- From the [Morino Institute Executive Summary](#)

The Morino Foundation and Mario M. Morino are the principal donors.

The Institute administers a directed grant program and does not accept unsolicited grant applications.

The Morino Institute

768 Walker Road, Suite 28
Great Falls, Virginia 22066
703-759-0477 (voice) 703-759-9584 (fax)
email: info@morino.org
<http://www.morino.org/>

League for Programming Freedom

The League for Programming Freedom is a grass-roots organization of professors, students, business people, programmers, and users dedicated to bringing back the freedom to write programs. This freedom is threatened by ``look-and-feel" interface copyright lawsuits and by software patents. The League is not opposed to the legal system that Congress intended--copyright on individual programs. Our aim is to reverse the recent changes made by judges in response to special interests.

-- From the LPF Membership Form

League for Programming Freedom

1 Square - #143 or P.O. Box 9171
Cambridge, MA 02139
617-243-4091 (voice)
email: lpf@uunet.uu.net

<http://www.lpf.org/index.html>

Student membership: \$10.50

National Public Telecomputing Network

Assists organizing groups that want to start a civic network in their town or community.

National Public Telecomputing Network

34555 Chagrin Blvd.

Moreland Hill, OH 44022

216-247-3328 (voice and fax)

<http://www.nptn.org/>

Center For Civic Networking

Provides technical consultants and partners for planning civic networking projects. They work on both the state and federal level to bring about policy changes that help community networks to flourish.

Center For Civic Networking

PO Box 65272

Washington D.C. 20037

202-362-3831

email: ccn@civicnet.org

<http://www.civic.net:2401/>

Institute for Global Communications

The Institute for Global Communications (IGC) is a nonprofit computer networking organization dedicated to providing low-cost worldwide communication and information exchange pertaining to environmental preservation, human rights, sustainable development, peace, and social justice issues. IGC operates the PeaceNet, EcoNet, ConflictNet, and LaborNet computer networks. With a combined membership of 10,000 individuals and organizations ranging in size and scope from United Nations Commissions to local elementary schools, IGC members contribute to more than 1200 conferences covering virtually every environmental and human rights topic.

-- From a Press Release for 1993 CPSR Norbert Weiner Award

Institute for Global Communications won the 1993 Norbert Wiener Award for Social and Professional Responsibility.

Institute for Global Communications

415-442-0220

email: info@igc.apc.org

<http://www.igc.apc.org/igc/igcinfo.html>

Conclusion

Although sometimes it is difficult to find the time to even email for more information. Hopefully this article has sparked some interest in one or two of these organizations. Almost all of them are looking for energetic volunteers. In return, you could get to work on a project that could impact society as a whole . . . or at least make it a little easier to graduate. Most of all, active participation in the issues we all face with the increase of IT is the aim of these organizations. So if you don't want to become a member, you can always buy a t-shirt and pay for GNU Chess. Have fun, learn a little and participate!

References

Most of this article was distilled directly from the various organization's brochures and bulletins to provide the reader an accurate picture of what each organization does. The author wishes to thank the organizations for making their documents available online and the individual writers for their care in preparing these concise documents.

1.

Schneiderman, Ben. *Human Values and the Future of Technology: A Declaration of Responsibility*. SIGCHI Bulletin, vol. 23 no. 1. p. 11-16.

2.

Johnson, Jeff and Evelyn Pine. *Towards a Guide for Social Action for Computer Professionals*. SIGCHI Bulletin, vol. 25 no. 1. p. 23-27.

3.

Barlow, John Perry. *Crime and Puzzlement*. Whole Earth Review, Fall 1990. p. 44-57.

4.

Barlow, John Perry. *Electronic Frontier: Dad's Invisible Guard-All Shield*. Communications of the ACM, vol. 37 no. 5. p. 15 -17.