generically
- Internet is used for distribution
- Internet is used by developers
  indirectly
  directly

Most free software uses the Internet. There is a lot of free software around. Free software on the Internet.

Software resources available on the Internet.

But software resources are the most sophisticated digital library.

Why bother?

2000-11-15

Thomas Kitchel

Software Resources

Lecture 7

L15960
It is difficult to find out what it does.

It can not be modified.

With another:

If will run on a computer with one OS, may not run on a computer

*looks like this; for example,

\begin{verbatim}
Binary code
\end{verbatim}

```
. source code
```

```
`binary` code
```

Software anatomy

```
. It is unlikely that the TCP/IP protocol stack would have "taken
. turn in universities.
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. turn in universities.
```

Generic Internet software
// For now, don't try to include termcap.h. On some systems, configure finds a non-standard termcap.h that the main build
// won't find. */

#include <termcap.h>

#defines HAVE_TERMCAP_H && 0

extern void *pts_p (const char *int, int (*int) (int));
extern int tgetaflag_p (char *int, const char *int);
extern int tgetmap_p (char *int, const char *int);

This is human (Geek) readable code.

May be understood by humans.

Can be changed.

Needs a compiler to translate into machine code.

A jammed printer

Early 80s, MIT lab get a printer as a shared resource, but with
faulty driver software that leads to jammed printers.

Richard Stallman tries to get the source code change the
software, but can not get it.

Resigned from MIT, All lab to work on a free replacement of UNIX,
Decides to work for software freedom. Founds Free Software
Foundation FSF

Free software is a matter of the users' freedom to run, copy,
redistribute, study, change, and improve the software.

- The freedom to study, how the program works, and adapt it
to your needs (freedom 1).
- The freedom to redistribute copies so you can help your
neighbor (freedom 2).
- The freedom to improve the program, and release your
improvements to the public, so that the whole community
benefits. (freedom 3).

Access to the source code is a precondition for freedom 1 and
open source software.
be constructed without software cost.

These pieces of software allow (almost) any kind of digital library

Apache, Mozilla, MySQL, etc.

Scripting languages: Perl, Python

compilers: gcc

Linux and FreeBSD

GNU

Important free software projects

Free software

Free software has no agreed meaning.

"Shareware" comes with a permission to share but users

"Proprietary software" is not free or semi-free.

modular versions for non-profit purposes.

"Semifree software" comes with permission for individuals

to use, copy, distribute, and modify (including distribution of

the distribution

copies may not be free.

"Public domain software", not copyrighted, but modified

free speech and free beer
The library world is still dominated by organizations that sell data, while there is currently no direct equivalent in the library world. There is a specific culture of sharing structured information.

Library community vs. free software movement

Finding free software

Most pieces of software have their own documentation website. Finding what pieces of software have been developed is the technical need that is already present.

Generally, not easy. Most likely you will have to have a processor than commercial software.

- much more stable
- much more secure
- more configurable
- less GUL in orientation

Free software is