Restrictions?

- Copyright Notice
- Distribution limits
- Gnu public license

Why Use Publically Available Software?

- Price
- Innovation
- Price
- Why duplicate work?
- Price

Where Can I Find Software?

- DECUS Library Tapes
- Usenet News
- Internet archives

What Is The Internet?

- A high speed network
- Worldwide network
- NSF Backbone (in U.S.)
- More than 727,000 Hosts*

*January 1992

How Do I Get It When I’ve Found it?

- Use the ftp(1) program
- Username = anonymous
- passwd = mail address

Anonymous ftp

```
kimery@dynamo$ ftp harbor.ecn.purdue.edu
220 harbor.ecn.purdue.edu server ready.
Connected to harbor.ecn.purdue.edu
Name (harbor.ecn.purdue.edu:kimery): anonymous
331 Guest login ok, send ident as password
Password:
230 Guest login ok, access restrictions apply
ftp>
```

Anonymous ftp (cont.)

```
ftp> ls
200 PORT command successful
150 opening ASCII connection to /bin/ls (0 bytes)
bin
etc
pub
226 Transfer complete
15 bytes received in 0.01 seconds (1.5 kbytes/s)
ftp>
```

Anonymous ftp (cont.)

ftp> cd pub

250 CWD command successful

ftp> ls

200 PORT command successful

150 open ACSII connection to /bin/ls (0 bytes)

csw.tar.Z

nfswatch3.0.tar.Z

security-doc.tar.Z

skunk-works

226 Transfter complete

273 bytes received in 0.15 seconds (1.8 Kbytes/s)

ftp>

Anonymous ftp (cont.)

```
ftp> dir
200 PORT command successful.
150 Opening ASCII mode data connection for /bin/ls (0 bytes).
total 2088
-r--r--r--  1 1311     1      36234  Mar  3 20:43 csw.tar.Z
-r--r--r--  1 40       1     141582 Jan 24  1991 nfswatch3.0.tar.Z
-r--r--r--  1 40       1     175811 Oct 25 20:54 security-doc.tar.Z
drwxr-xr-x  6 14304    1        512    Feb 10 19:28 skunk-works
226 Transfer complete.
1149 bytes received in 0.28 seconds (4 Kbytes/s)
ftp>
```

Anonymous ftp (cont.)

```
ftp> binary
200 Type set to I.
ftp> hash
Hash mark printing on (8192 bytes/hash mark).
ftp> get access.tar.Z
200 PORT command successful.
150 Opening BINARY mode data connection for access.tar.Z (52160 bytes).
#################################################
226 Transfer complete.
local: access.tar.Z remote: access.tar.Z
52160 bytes received in 0.36 seconds (1.4e+02 Kbytes/s)
ftp>
```

Anonymous ftp (cont.)

```
ftp> ascii
200 Type set to A.
ftp> hash
Hash mark printing on (8192 bytes/hash mark).
ftp> get access.tar.Z
200 PORT command successful.
150 Opening ASCII mode data connection for README (2263 bytes).
##################################################
226 Transfer complete.
local: REAME remote: README
3363 bytes received in 0.21 seconds (11 Kbytes/s)
ftp>
```

Anonymous ftp by mail!

- Service provided by Digital
- Works with all mail, including uucp mail.
- Can transfer both binaries and ascii files.

Ftpmail Commands

- reply <MAILADDR>
- connect [HOST [USER[PASS]]]
- ascii
- binary
- chdir PLACE
- compress
- compact
- uuencode
- btoa
- ls PLACE
- dir PLACE
- get FILE
- quit

Ftpmail
Help

To: uunet!decwrl!ftmail

From: kimery@ecn.purdue.edu

help

quit

Simple Ftpmail Example

To: uunet!decwrl!ftpmail

From: kimery@ecn.purdue.edu

connect

chdir /pub

ls

quit

Connect Notes:

- You MUST issue a connect
- default host:
  gatekeeper.dec.com
- default user:
  anonymous
- default password:
  your return mail addr

Ftpmail Example II

To: uunet!decwrl!ftpmail
From: kimery@ecn.purdue.edu

connect
chdir pub
get README
quit

Notes:

- The default transfer mode is ASCII
- All files broken up into 60K chunks

More Involved Example

To: uunet!decwrl!ftpmail

From: kimery@ecn.purdue.edu

connect

binary

compress

uuencode

get pub/GNU/emacs-18.58.tar.Z

quit

Notes:

• default binary encoding:
  btoa

• compress is an option

Non-Gatekeeper Example

To: uunet!decwrl!ftpmail

From: kimery@ecn.purdue.edu

connect ftp.uu.net

dir

quit

Ok, Now How Do I Find It?

- dumb-luck
- Usenet postings
- Word of Mouth
- Archie

Archie

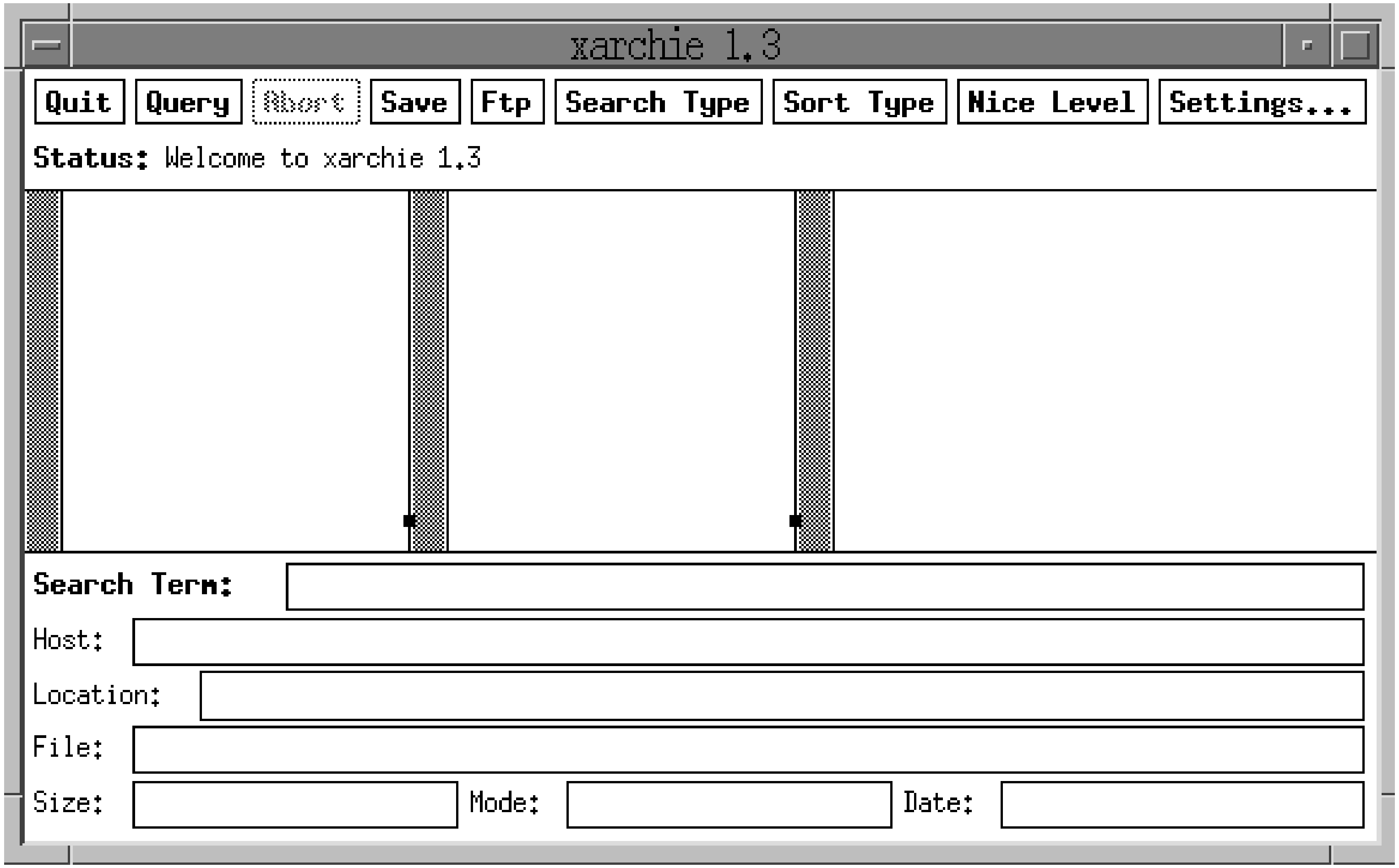
- Internet Archive Server
- Written at McGill Univ.
- Many hosts provide servers
- Many interfaces

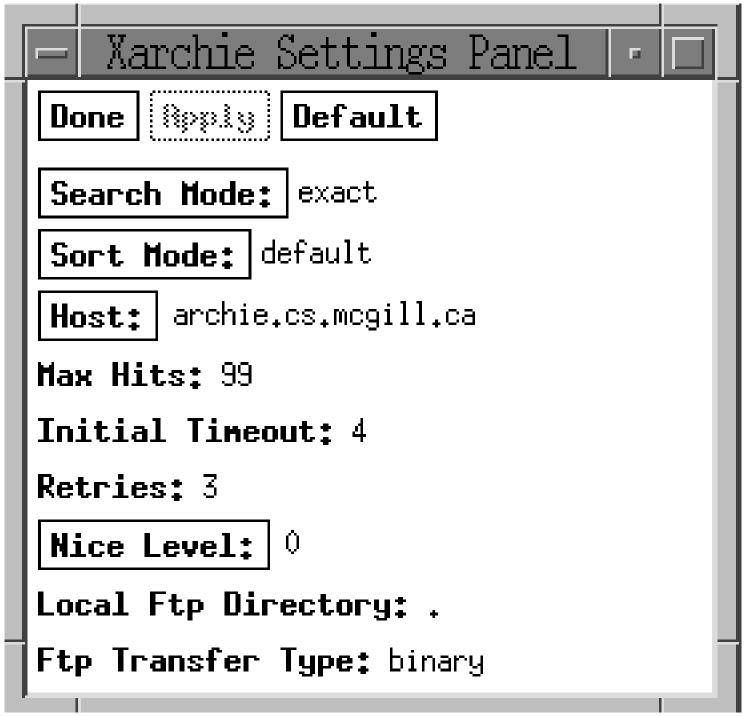
How Does It Know?

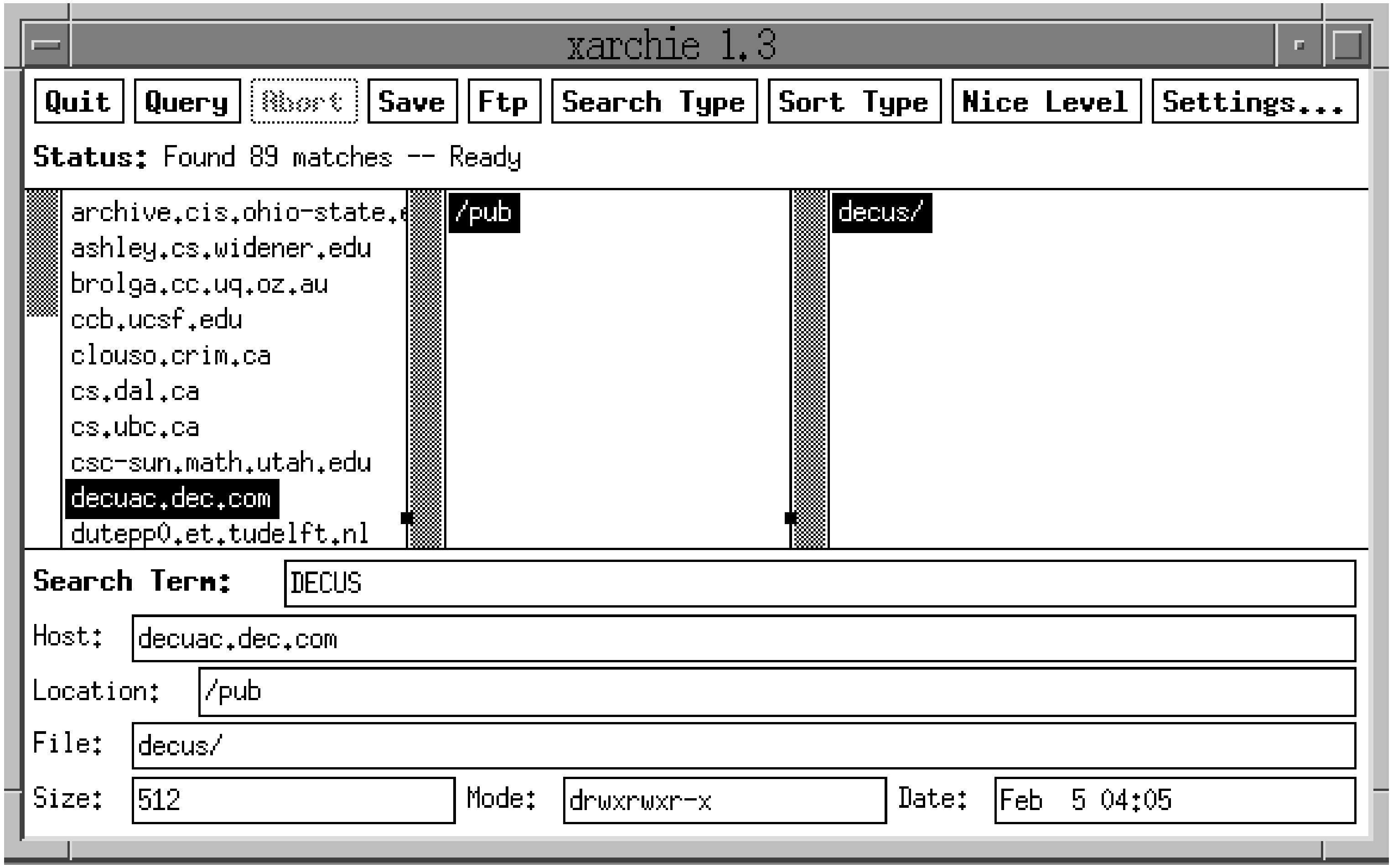
- **Data for more than 800 sites**
- **Site info updated ~monthly**
- **Searches the Internet**

What Interfaces Are Available

- X Window System
- Command line
- Mail
- Telnet


xarchie 1.3
Quit
Query
Abort
Save
Ftp
Search Type
Sort Type
Nice Level
Settings...
Status: Welcome to xarchie 1.3
Search Term:
Host:
Location:
File:
Size:
Mode:
Date:


Xarchie Settings Panel
Done
Apply
Default
Search Mode: exact
Sort Mode: default
Host: archie.cs.mcgill.ca
Max Hits: 99
Initial Timeout: 4
Retries: 3
Nice Level: 0
Local Ftp Directory: .
Ftp Transfer Type: binary


xarchie 1.3
Quit
Query
Abort
Save
Ftp
Search Type
Sort Type
Nice Level
Settings...
Status: Found 89 matches -- Ready
archive.cis.ohio-state.
ashley.cs.widener.edu
brolga.cc.uq.oz.au
ccb.ucsf.edu
clouso.crim.ca
cs.dal.ca
cs.ubc.ca
csc-sun.math.utah.edu
decuac.dec.com
dutepp0.et.tudelft.nl
/pub
decus/
Search Term: DECUS
Host: decuac.dec.com
Location: /pub
File: decus/
Size: 512
Mode: drwxrwxr-x
Date: Feb 5 04:05

E-mail Interface

- **server by archie.cs.mcgill.edu**
- **commands may be in subject and body**
- **Commands supported:**
  - help
  - path
  - prog
  - site
  - compress
  - quit

Simple Example

To: archie@cs.mcgill.ca
From: kimery@ecn.purdue.edu
Subject: help

To: archie@cs.mcgill.ca
From: kimery@ecn.purdue.edu

help

No Response?

- May have to use the path command to specify a return path for the E-mail.

To: archie@cs.mcgill.ca
From: kimery@ecn.purdue.edu

path uunet!pur-ee!kimery
help

A Simple Search String

To: archie@cs.mcgill.ca

From: kimery@ecn.purdue.edu

prog DECUS

A Real Search String

To: archie@cs.mcgill.ca

From: kimery@ecn.purdue.edu

prog *unisig*

prog .*.gif

prog   xv*1*tar

(each prog command generates a seperate mail message)

Archie RegEx Rules

- Follow ed(1) rules EXCEPT

  - expressions with spaces must be quoted with single (’) or double (") quotes

- Searches are case insensative

Site Listings

- Archie can generate a complete site list

  To: archie@cs.mcgill.ca

  From: kimery@ecn.purdue.edu

  site gatekeeper.dec.com

  (Raw Internet addresses may be used in place of hostnames)

Good Ftp Sites

- export.lcs.mit.edu — Latest Release of X windows
- gatekeeper.dec.com — Lots of general stuff
- ftp.uu.net — Usenet archives, etc
- sumex.standford.edu — Mac Archives
- wuarchive.wustl.edu — PC Archives (and more)