Linux HAM-HOWTO, Amateur Radio Software List

Terry Dawson, VK2KTJ, terryd@extro.ucc.su.oz.au v1.5 14 Jan 1995

It is hoped that this list will assist Amateur Radio operators in finding and trying the various amateur radio software that has been written for, or ported to Linux. It is also hoped that as a consequence of this information being available that more amateur radio operators will choose Linux as the platform of choice for their experimentation, and that software developers will choose Linux as the platform for their software development, further expanding the role of operating systems like Linux in the Amateur Radio field.

Contents

1 Introduction.

This list was prompted by comments that had been expressed in the various Linux newsgroups about the number of amateur radio operators that were involved with Linux. It seemed to me that I was catching snippets of information here and there relating to development efforts taking place, but I never really knew where to locate either the person responsible for a particular piece of software, or the software itself. The list is growing as new packages are found.

This list is not limited to non-commercial software in any way. Taking a serious look at most amateur radio fields shows that most good developments are those that are designed by individuals and that commercial entities have taken up and disseminated to the mass market. I'd like to see the same happen for Linux support for Amateur Radio software too.

This list was originally called the RADIOLINUX list, but Matt Welsh suggested that there was no reason why it shouldn't be distributed with the Linux Documentation Project documents, so it has been renamed the

HAM-HOWTO and will be made available with the rest of the Linux Documentation. I make no apologies for the name.

1.1 Changes from the previous version

```
Additions:
        Ping/Pong convers server.

Corrections:
        Updated locations of some pieces of software.
        Updated version of SatTrack to 3.0
```

2 Where to obtain new versions of this list.

This list will be periodically posted to the `comp.os.linux.announce` newsgroup, and to the `HAMS` list on `niksula.hut.fi`.

It is also available from the following World Wide Web sites:

The Linux Documentation Project runs a Web Server and this list appears there as *The HAM-HOWTO* (`http://sunsite.unc.edu/mdw/HOWTO/HAM-HOWTO.html`).

Dennis Boylan N4ZMZ <`dennis@nanovx.atl.ga.us`> makes it available at the following three locations: *www.com* (`http://www.com/linux/radio/index.html`), *www.hboc.com* (`http://www.hboc.com/linux/index.html`) and *www.lan.com* (`http://www.lan.com/linux/index.html`).

John Gotts N8QDW <`jgotts@engin.umich.edu`> makes it available at: *www.engin.umich.edu* (`http://www.engin.umich.edu/ jgotts/linuxhamsoft.html`).

Alan Hargreaves VK2KVF <`alan@dap.CSIRO.AU`> makes it available in Australia at: *www.dap.csiro.au* (`http://www.dap.csiro.au/RadioLinux`).

Please let me know if you'd like to make it available somewhere too. I'd like to see it on some Web Servers that are accessible from radio.

3 Satellite Software.

The following software is for use in experimentation with Satellite communication.

3.1 MicroSat Ground Station Software

Author

John Melton, G0ORX/N6LYT, g0orx@amsat.org and Jonathan Naylor G4KLX, g4klx@amsat.org

Description

Microsat Ground Station software.

Status

BETA. Version 0.9-Xaw released.

System requirements

Alan Cox's kernel based AX.25 support ver 1.1.12 or better. X-Windows. The programs make use of the Athena Widgets and look much better with the 3D libraries.

Detail

This software allows you to use of a KISS tnc to directly communicate with the Microsat series of satellites. It provides an Athena Widgets based X-Windows interface, and allows you a comprehensive range of means of interacting with the satellite. The software should work with any window manager.

The software provides the following programs:

xpb:
broadcast monitor

xpg:
ftl0 file upload program, message upload program

xtlm:
telemetry display program

downloaded:
downloaded file list viewer

directory:
directory list viewer

message:
message preparation application

viewtext:
uncompressed ASCII text file viewer

viewlog:
display the contents of some log files

xweber:
special program for downloading webersat images

phs:
general purpose PACSAT header stripper

Where and How to obtain it.

John's software is available from:

ftp.ucsd.edu
(`ftp://ftp.ucsd.edu/hamradio/packet/tcpip/incoming/microsat-0.9-Xaw.tar.gz`)
or *ftp.funet.fi* (`ftp://ftp.funet.fi/pub/ham/satellite/microsat/microsat-0.9-Xaw.tar.gz`).
Please check for new versions.

Licensing/Copyright

GNU Public License. Freely redistributable, No warranty.

Contributed by:

John Melton, G0ORX/N6LYT, Alan Cox, GW4PTS, Jonathon Naylor, G4KLX

3.2 SatTrack - Satellite tracking program

Name

SatTrack

Author

Manfred Bester, DL5KR, manfred@ssl.berkeley.edu

Description

A VT100 and X11 based satellite tracking program.

Status

Version 2.0 is a release version.

System requirements

A vt100 terminal and or X11 server. A Maths Coprocessor for good performance, though it seems to work just fine on my 486sx25.

Detail

SatTrack provides a real-time or predictive display of Satellite orbit data. The current version uses a VT100 display to provide a text based interface to the data and an X11 based display to provide a graphical view of the orbit data.

Compiling the software under Linux is quite straightforward. Manfred has designed the Makefile to compile the software directly under your home directory, this is easy to change.

The steps I took were:

```
# cd /usr/src
# export HOME=/usr/src
# gzip -dc sattrack.V3.0.tar.gz | tar xvf -
# cd SatTrack/src
# vi Makefile
  {Comment SUN4 compile options}
  {Uncomment the linux options}
  {Select the options you want}
# make
```

Where and How to obtain it.

SatTrack can be found at: *ftp.jvnc.net* (`ftp://ftp.jvnc.net/priv/kupiec/sattrack/sattrack.V3.0.tar.Z`) or *ftp.funet.fi* (`ftp://ftp.funet.fi/pub/ham/satellite/tracking/sattrack.V3.0.tar.Z`).

Licensing/Copyright

Contributed by:

Manfred Bester, DL5KR

4 Shack Automation Software.

Software for simplifying tasks in the shack. Examples might include software for controlling the newer breed of radios, logging programs, QSL database, or antenna rotation.

5 Packet Radio

Software for use in conjunction with, or for facilitating packet radio.

5.1 Kernel Based AX.25 networking.

Author

Alan Cox, GW4PTS, iialan@iifeak.swan.ac.uk

Description

Software that allows the Linux Kernel to perform AX.25 networking.

Status

ALPHA. Quite stable though.

System requirements

Linux kernel 1.0 or later.

Detail

Alan's software provides the programmer with a berkeley socket based interface to the AX.25 protocol. AX.25 sockets can opened for either connected, or connectionless modes of operation. Support to allow tcp/ip over AX.25 is provided. The user applications has been Jonathon G4KLX. The software comes in two parts, a kernel patch, and the user programs. The user programs included are:

axadd

to manipulate the AX.25 ARP table.

axattach

to convert a serial device into a KISS device.

axl

an AX.25 listener designed to start a PMS when it receives an incoming connection. The PMS is still very new.

axsetcall

to change the callsign of a port.

beacon

generated beacon messages every 30 minutes.

call

A linemode AX.25 connection program. Call allows you to make connections to other AX.25 nodes. It provides file transmit and receive capabilities, and newer versions allow YAPP binary file transfers.

listen

a demonstration of how to use intercept AX.25 frames at the raw packet level. Useful as a building block for packet tracing for example.

Where and How to obtain it.

There are a number of different versions of the software. You must choose the one that suits your version of Linux kernel. The software is available from: *sunacm.swan.ac.uk* (`ftp://sunacm.swan.ac.uk/pub/misc/Linux/Radio/`)

More detail on where and how to obtain the software is provided in the *plain text version of the NET-2-HOWTO* (`ftp://sunsite.unc.edu/pub/Linux/docs/howto/NET-2-HOWTO`) or if you have WWW access at: *NET-2-HOWTO via WWW* (`http://sunsite.unc.edu/mdw/HOWTO/NET-2-HOWTO.html`).

Licensing/Copyright

Most of the software is covered by the GNU Public License, some of the software is Copyright by the Regents of University California Berkeley, and small portions of the user programs are Copyright Phil Karn KA9Q, whose copyright allows unrestricted use by Amateur Radio, Educational Institutions and Commercial KA9Q OEM license holders.

Contributed by:

Terry Dawson, VK2KTJ.

5.2 JNOS

Author

Brandon Allbery, KF8NH, bsa@kf8nh.wariat.org

Description

Brandon ported JNOS to Linux. His port is currently of the 1.09 (aka 1.08df) release of JNOS. Future versions will probably be based on Doug Crompton's evolution of 1.08df. Brandon suggests that JNOS for Linux is primarily of interest to people with existing DOS-based NOS configurations (especially server/switch configurations) who wish to switch to Linux or to escape the 640K barrier.

Status

The current version is ALPHA.4. Brandon is still tracking down bugs, as well as evolving new features.

System Requirements.

Any version of Linux along with *ncurses* 1.8.1 or 1.8.5 (the latter is preferred). Optionally you will require Linux networking (at least loopback) and *slattach* (kernels pre-1.1.13 or post-1.1.20 required for this).

Detail

If you include the Linux networking code in addition to JNOS, you can link the two by a slip link running over a pty, so that Linux can provide services to your radio users. In this way you can easily add servers without having to build them into JNOS itself. Brandon has supplied the following list of known bugs:

- some servers seem to be causing unexplained exits.
- PPP is reported not to work in ALPHA.4, although it worked in ALPHA.3.
- BBS forwarding when convers is compiled in but not configured causes core dumps.
- the finger server is getting bad filenames.
- the bbs W command is case-munging filenames.

Where and How to obtain it.

You can obtain JNOS for Linux ALPHA.4 at: *ftp.ucsd.edu* (`ftp://ftp.ucsd.edu/hamradio/packet/tcpip/linux/j109lxA4.tgz`) *ncurses* is available on most Linux ftp sites.

Licensing/Copyright

Brandon's modifications to JNOS are public domain. Most of the pre-existing NOS code is copyrighted and restricted to non-commercial use by the various contributors from Phil Karn on.

Contributed by:

Brandon Allbery, KF8NH

5.3 N0ARY Packet BBS for UN*X

Author

Bob Arasmith, N0ARY, ported to Linux (and others) by Bob Proulx, KF0UW, rwp@fc.hp.com

Description

A packet bbs implemented under UN*X.

Status

ALPHA. Bob is running version ARY-0.9 on both Linux and HP-UX. The next version from N0ARY which is called 4.0 is in alpha test/development release. Bob has not been able to bring this online yet and is still running 0.9+kf0uw mods. Bob has about half it working with Alan Cox's AX.25 kernel which would be the desirable combination.

System Requirements.

Linux installation, C Compiler, plus HAM radio TNC hardware.

Detail

This bbs has an excellent packet user interface. It has a compatible set of commands with the RLI bbs so users will be familiar with it immediately. It then extends the command set to be a very nice natural language style interface (e.g "list at allus about KPC-3"). Many csh style bang commands are supported. Also included is a mail interface to provide a packet to internet gateway.

Currently you need to customize the source code for your installation so you need some C programming proficiency.

Where and How to obtain it.

For a Linux version or for Linux information send mail to `rwp@fc.hp.com`. For a SunOS version contact `bob@arasmith.com`. This code is not packaged for distribution yet since it is not past the alpha stage of development.

Licensing/Copyright

Copyright by Bob Arasmith, N0ARY, but freely redistributable.

Contributed by:

Bob Proulx, kf0uw, rwp@fc.hp.com

5.4 MBL/RLI message to NNTP and email converter.

Author

SM0OHI, pme@it.kth.se

Description

Software that will convert incoming MBL/RLI messages into either NNTP or RFC-822 formatted mail messages.

Status

Development, not yet released.

System requirements

Unknown.

Detail

This software would be ideally suited to those who want to establish a mail and news gateway between conventional tcp/ip networks and the amateur radio mail network.

Where and How to obtain it.

Not yet availale.

Licensing/Copyright

Unknown.

Contributed by:

SM0OHI

5.5 Single floppy disk AX.25 router.

Author

Alan Cox, GW4PTS, iialan@iifeak.swan.ac.uk

Description

A single floppy disk version of linux with enough software to allow a PC to act as an AX.25/IP router.

Status

Development, not yet released.

System requirements.

As for any Linux system a 386SX class PC or better.

Detail

No detail yet.

Where and How to obtain it.

Not yet available.

Licensing/Copyright

Unknown/Undecided.

Contributed by:

Terry Dawson, VK2KTJ

5.6 TNT.

Author

Mark Wahl, DL4YBG, DL4YBG @ DB0BLO.#BLN.DEU.EU, wahlm@zelator.de

Description

A Hostmode terminal program for TNC's that support the WA8DED hostmode protocol.

Status

Version 0.8 is reportedly stable.

System requirements

TNC supporting WA8DED hostmode protocol, serial line.

Detail

TNT is a full featured hostmode terminal program. Compiling it on Linux is as difficult as untarring the source and typing 'make'. It provides both a 'dumb' terminal and X11 version. It comes with some comprehensive documentation which describes its features in some detail. Its main features are:

Multiple sessions:

TNT supports multiple packet radio connections on virtual screens that you can switch between. Each session window provides split screen (seperate transmit and receive text) operation with a status line. Commands can be entered in either a command session, or in any terminal session using a command key. Each of the virtual screens can be larger than the physical screen and can be scrolled around.

Data capture, file transfer and logging:

A number of options are available for logging received text to files. You can log transmit, receive or both to a log file. You can overwrite or append received data to existing files. You can use the 'autobin' protocol to transmit or receive binary files.

Remote Shell operation:

You can provide a shell to remote users so that they can access other programs on your computer. You can also run a program and direct its input/output to a channel so that users can use it.

Redirection of devices to a channel:

TNT allows you to redirect input/output from a channel to a device, a modem for example.

Umlaut conversion:

TNT provides umlaut conversion if necessary.

Remote mode:

Remote users can issue command themselves if allowed to do so.

Socket mode:

You can configure tnt so that it opens a socket for users to telnet to that allows them operation just as you have from the console. This is useful where your linux machine is on an ethernet and you want other terminal on the net to have use of your radio.

Where and How to obtain it.

The software is available by anonymous ftp from: *ftp.funet.fi* (`ftp://ftp.funet.fi/pub/ham/unix/packet/tntsrc08.tgz`). This site is mirrored at a number of places so you will probably find it at other places as well.

Licensing/Copyright

GNU Public License. Freely redistributable, no warranty.

Contributed by:

Steffen Weinreich, DL5ZBG.

5.7 IPIP encapsulation daemon.

Name

Mike Westerhof's IPIP encapsulation daemon.

Author

Mike Westerhof KA9WSB (original code), then Bdale Garbee N3EUA (port to BSD), then Ron Atkinson N8FOW and John Paul Morrison (port to Linux).

Description

A daemon that will allow you to use your linux machine as an IPIP encapsulating gateway.

Status

Ron is running this code himself, and the other version have been run quite successfully.

System requirements

KISS TNC, any version of Linux supporting RAW sockets.

Detail

If you've ever used an internet gateway from your amateur packet radio you have probably been connected by an encapsulation gateway of some descpription. Most run KA9Q's NOS and DOS, but others run Unix and this daemon. It allows you to encapsulate IP within IP, so that you can 'tunnel' IP connections over the Internet. The software allows you to connect a KISS TNC to your linux machine and to have all datagrams received on it carried across the Internet to a similar gateway. Ron has supplied a `Makefile` that will allow you to easily compile to software. It compiled without errors on my system running a recent version kernel. Ron has also written some `README` files which give you the detail necessary to compile the system and the original docum entation describes how to configure it.

Where and How to obtain it.

This software is available in the *sunsite.unc.edu ham apps directory* (`ftp://sunsite.unc.edu/pub/Linux/apps/ham/ipip.tar.gz`).

Licensing/Copyright etc.

Freely distributable, though Bdale asks that if you use the code and like it you might send him a QSL card or a postcard.

Contributed by:

Ron Atkinson, N8FOW

5.8 AXIP encapsulation daemon.

Name

Mike Westerhof's AXIP encapsulation daemon.

Author

Mike Westerhof KA9WSB, ported to Linux by Ron Atkinson N8FOW.

Description

A daemon that will allow you to use your linux machine as an AXIP encapsul ating gateway.

Status

Not properly tested, but assumed to work ok.

System requirements

KISS TNC, any version of Linux supporting RAW sockets.

Detail

This daemon is the partner to the IPIP encapsulation daemon. It allows you to encapsulate AX.25 frames in IP to carry them across the Internet. This is useful for linking AX.25 networks in remote areas. Ron has supplied a `Makefile` for linux, and with it the software compiled without errors on my system running a recent version kernel. Ron has also written some `README` files which give you the detail necessary to compile the system and the original documentation describes how to configure it.

Where and How to obtain it.

This software is available in the *sunsite.unc.edu ham apps directory* (`ftp://sunsite.unc.edu/pub/Linux/apps/ham/ax25ip.tar.gz`).

Licensing/Copyright etc.

Freely distributable so long as the original copyright notice is not removed.

Contributed by:

Ron Atkinson, N8FOW

5.9 Ping-Pong Convers Server

Name

Fred Baumgartens Convers Server for Linux.

Author

Fred Baumgarten, DC6IQ, <dc6iq@insu1.etec.uni-karlsruhe.de¿

Description

This is a version of the convers server that allows multiple users to simultaneously chat with each other in a round-table style conversation. It is compatible with the NOS convers servers, but provides extra facilities such as saving/restoring of Personal Text and Chanel Topics.

Status

In use of a number of popular convers servers, appears very stable.

System requirements.

Linux, GNU make, C compiler.

Detail.

Complete installation instructions are included in the `INSTALL` file that is included in the distribution.

Where and How to obtain it.

A distribution of this software is available in the *sunsite.unc.edu ham apps directory* (`ftp://sunsite.unc.edu/pub/Linux/apps/ham/convers-941122.tar.gz`). The home of the software is at *insu1.etec.uni-karlsruhe.de ftp server* (`ftp://insu1.etec.uni-karlsruhe.de/pub/hamradio/convers/convers`)

Licensing/Copright etc.

Presumably copyright Fred Baumgarten (not specifically stated), but some portions appear to be free for non-commercial use and copying provided the copyright notices stay intact.

Contributed by:

Terry Dawson, VK2KTJ

5.10 Wampes

A port of Wampes to Linux. Could someone send me details of the latest wampes release please ?

6 Morse Code

Software for use in conjunction with, or for facilitating Morse communication.

6.1 Morse trainer.

Author

Alan Cox, GW4PTS, iialan@iifeak.swan.ac.uk

Description

A Morse Code trainer that uses the PC internal speaker

Status

stable, works quite well, unfinished.

System requirements

Linux, any version

Detail

Alan wrote this small program in only an hour. It is quite neat, and allows you to play morse at a range of speeds and frequencies through the PC internal speaker. You can specify the text to be played either from the command line, from a file, or the program is capable of generating random character groups. As it stands you must invoke the program from a Linux Virtual Console, as it relies on certain kernel calls to produce the sound, and these don't work as easily from an XTerm. As it sounds each character it lists the character in verbal form (Di, Dit, Dah etc.) to the screen. Alan is hoping that someone will take the code and enhance it with the features he has listed in the comments at the head of the source file.

Where and How to obtain it.

I've had a large number of responses from people seeking this code, so I've obtained Alan's permission to make it available. You can obtain it from *sunsite.unc.edu* (`ftp://sunsite.unc.edu/pub/Linux/apps/ham/GW4PTS.morse.tar.gz`).

Copyright/Licensing

GNU Public License 2, freely redistributable, no warranty.

Contributed by:

Terry Dawson, VK2KTJ, terryd@extro.ucc.su.oz.au

7 AMTOR Software.

Software for use in conjunction with, or for facilitating AMTOR.

8 PACTOR Software.

Software for use in conjunction with, or for facilitating PACTOR.

9 Slow Scan Television Software.

Software for use in conjunction with, or for facilitating Slow Scan Television.

10 Facsimile Software.

Software for use in conjunction with, or for facilitating Facsimile.

11 Design and Construction Software.

Software to assist in the design and construction of amateur radio related things. Antenna, Circuit Board, Filter, and QSL card design packages are all good candidates for this section.

11.1 Software Oscilloscope

Author

Jeff Tranter, Jeff_Tranter@Mitel.COM

Description

Scope is a simple software emulation of an oscilloscope. It graphically displays voltage as a function of time.

Status

ALPHA. First release.

System requirements

Sound card with input capability supported by the kernel sound driver. SVGALIB is used to do the display work.

Detail

Scope uses the `/dev/dsp` device to take audio in from the soundcard and displays it on the screen in a manner similar to an oscilloscope. Jeff claims Scope was written more for amusement value than for any serious purpose.

Where and How to obtain it.

You can obtain source, makefile and man page for Scope from: *sunsite.unc.edu* (`ftp://sunsite.unc.edu/pub/Linux/apps/circuits/scope-0.1.tar.gz`)

Licensing/Copyright

GNU Public License, Freely redistributable, No warranty.

Contributed by:

Terry Dawson, VK2KTJ

11.2 irsim

Author

Dmitry Teytelman, dim@leland.stanford.edu

Description

An event-driven logic-level simulator for MOS circuits

Status

Version 8.6, production.

System Requirements

X-Windows.

Detail

irsim is an X11 based simulator for MOS circuits. It has two simulation modes, either *switch* where each transistor is modelled as a voltage controlled switch, or *linear* where each transistor is modelled as a resistor in series with a voltage controlled switch, and each node has a capacitance.

Where and How to obtain it.

You can obtain irsim from: *sunsite.unc.edu* (`ftp://sunsite.unc.edu/pub/Linux/apps/circuits/irsim.tar.z`).

Licensing/Copyright

Freely Redistributable

Contributed by:

Terry Dawson, VK2KTJ

11.3 Spice

Author

University of California, Berkeley, ported by eoahmad@ntuix.ntu.ac.sg

Description

Spice is an analog circuit emulator.

Status

Stable release. Last fortran version produced.

System requirements

Unknown.

Detail

Spice allows you to design and test circuits in a computer modelled environment to see how they will behave without having to touch a soldering iron, or solder.

Where and How to obtain it.

You can obtain version 2g6 of Spice from: *sunsite.unc.edu* (`ftp://sunsite.unc.edu/pub/Linux/apps/circuits/spice2g6.tar.z`)

Licensing/Copyright

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Contributed by:

Terry Dawson, VK2KTJ

12 Training/Educational Software.

Software to assist in education or training for amateur radio. Morse Code tutorials, technical examination database, Computer Based Training software, and the like are listed here.

13 Miscellaneous Software.

Software that I couldn't put anywhere else.

13.1 SunClock

Author

John Mackin, john@cs.su.oz.AU

Description

A clock that will show you instantly what parts of the globe are exposed by sunlight and what parts aren't.

Status

Released.

System requirements.

X-Windows.

Detail

sunclock is another of those desktop gadgets that most people think look nice but really don't have a lot of use for. I use sunclock to obtain an at-a-glance indication of the time anywhere in the world. In its iconic form it sits in a small Mercator projection. When maximised it produces the same image but obviously larger with slightly more detail. It also displays the date, local time and UTC. sunclock actually calculates mathematically what parts of globe are sunlit and which aren't, it seems quite accurate, so long as you assume the earth has no atmosphere.

Where and How to obtain it.

I haven't seen any precompiled sunclock binaries for Linux about, so check your nearest *archie* server. sunclock compiled straight out of the box for me.

Licensing/Copyright

Public Domain and may be freely copied as long as the notices at the top of sunclock.c remain intact.

Contributed by:

Terry Dawson, VK2KTJ

13.2 Xearth

Author

Kirk Lauritz Johnson, tuna@cag.lcs.mit.edu, modified by Dimitris Evmorfopoulos, devmorfo@cs.mtu.edu.

Description

A rotating earth for X-windows root window. It has real life shading, and options for geostatic view, and non geostatic view. A prettier and more modern version of *sunclock* but requires a bit more processing power.

Status

released, stable.

System requirements.

X-Windows.

Detail

xearth is much like *sunclock* except that it draws a view of the earth onto your root map in blue and green, as the earth would be viewed from space. You have a number of options in determining the behaviour of the view. You can either have it so that the same part of the earth is displayed, and the sun rotates, so you'll have varying light and shadow on the display, or you can have it shown as if you were travelling with the sun, so the whole of the globe is visible, and the earth rotates. You can specify the latitude/longtitude that will be the centre of the display. *xearth* is also capable of producing *gif* and *ppm* graphics output, so you can generate custom graphics of the globe. When run as your root map, you can adjust the interval of time between updates. On my 486sx25 you notice a small degradation in performance when it is recalculating, but it's not annoying.

Where and How to obtain it.

A precompiled *xearth* binary is available from: **sunsite.unc.edu**, or the source can be obtained from just about any X11/contrib directory. Try **export.lcs.mit.edu** if you can't find it elsewhere.

Licensing/Copyright

Copyright (C) 1989, 1990, 1993 by Kirk Lauritz Johnson. The copyright notice included states that *xearth* is freely redistributable so long as the copyright notice is left intact, and be included in documentation.

Contributed by:

Alan Cox, GW4PTS.

14 How to contribute or update an entry.

I'd like for this list to be as complete and up-to-date as possible. So I'm keen to hear about any developments or products that I don't already know about, or that the entry is obselete or outdated for.

What I'd like as a minimum set of requirement would be something like the following:

Name

The name of the software in question.

Author

Who wrote, or ported the software. An email address, or some other means of contacting them is also essential.

Description

A single line description of what the software does.

Status

An indication of the software's status. Is it still in testing? Is it a production release? Is it still in the design stage?

System requirements

What does the software require to run? Does it require X-Windows? Does it need a soundcard? Does it need a certain version of kernel? Does it need other software to support it?

Detail

I'm not keen on including a large amount of detail on each piece of software as this would consume a lot of time reading and trying to keep up to date. So instead what I'd like to list is what makes this software unique, anything special about it. Perhaps its most outstanding features, that sort of thing.

Where and How to obtain it.

If the software is freely distributable then ftp details would be great. If it is commercial software then the name of the company distributing the software, and an address or telephone number. If it is available only by some other means, say mail order, then details on where and how to obtain it.

Licensing/Copyright

Is the software Copyleft? Copyright? Shareware? Public Domain? Restricted in use in any way?

Don't worry if you don't know all of these details, just send me what you do know and I'll list what I can. I'd rather have an incomplete listing than no listing at all.

Please mail any contributions to:

`terryd@extro.ucc.su.oz.au` or `terry@orac.dn.itg.telecom.com.au`

I'd list a packet radio address too but I'm still not properly operational again yet after moving house.

15 Discussion relating to Amateur Radio and Linux.

There are various places that discussion relating to Amateur Radio and Linux take place. They take place in the `comp.os.linux.*` newsgroups, they also take place on the `HAMS` list on `niksula.hut.fi`. Other places where they are held include the `tcp-group` mailing list at `ucsd.edu` (the home of amateur radio tcp/ip discussions), and I believe there is an 'IRC' channel that sometimes is used to discuss them as well.

To join the Linux **HAMS** channel on the mail list server, send mail to:

```
linux-activists@niksula.hut.fi
```

with the line:

```
X-Mn-Admin: join HAMS
```

at the top of the message body (not the subject line).

To join the `tcp-group` send mail to:

```
listserver@ucsd.edu
```

with the line:

```
subscribe tcp-group
```

in the body of the text.

Note: Please remember that the `tcp-group` is primarily for discussion of the use of advanced protocols, of which tcp/ip is one, in Amateur Radio. *Linux specific questions should not ordinarily go there.*