

Want to know more about NetBSD?

POWER TO THE DAEMON

In last month's *Free World* Richard Ibbotson took a closer look at FreeBSD. This month it's the turn of NetBSD. Never heard of it? Then read on further

BSD, just like GNU/Linux, has its fashionable version of the year. With BSD we nearly always find that it's NetBSD and that's the end of it. Just lately, however, NetBSD has been showing signs of being the trendy and fashionable BSD about town. A quick look at the NetBSD site will reveal that this version of BSD will run on just about anything that resembles computing hardware and no matter what that hardware is, things nearly always work as they should. NetBSD is somewhere between Free BSD and Open BSD in terms of ease of use and security. It is probably just as easy to get support for NetBSD as it is for NetBSD and

the mailing lists that can be accessed through the NetBSD site are just about the best on the Internet.

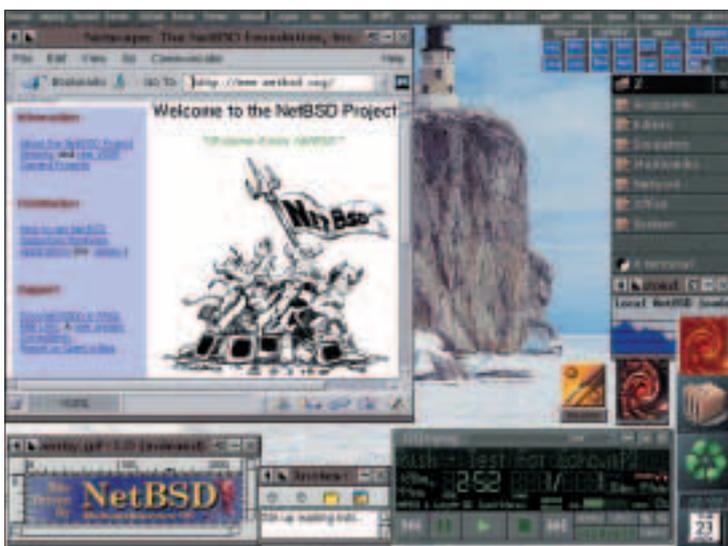
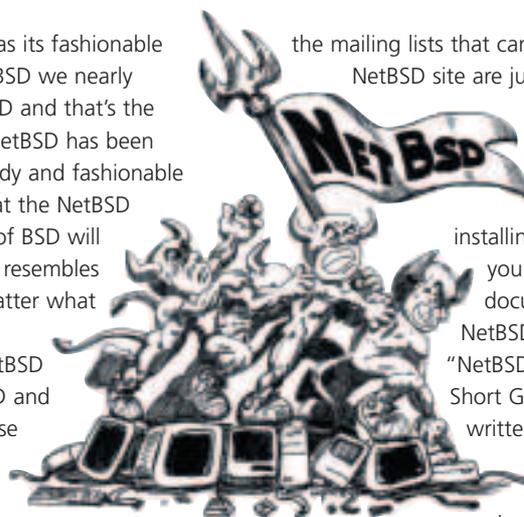
The smallprint

Just before or just after installing the NetBSD software you should get hold of the documentation from the NetBSD site in the form of the "NetBSD Operating System: A Short Guide", which has been written by Federico Lupi. This is an excellent document and you should read it thoroughly. It's available in

several formats and so you shouldn't have any problems reading it. At page eleven you can read the licence, which says:

"Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- All advertising materials mentioning features or use of this software must display the following acknowledgement: this product includes software developed by Federico Lupi for the NetBSD Project.
- The name of the author may not be used to



NetBSD is full of features to explore

endorse or promote products derived from this software without specific prior written permission."

This more or less means that you can do what you like as long as you retain the copyright statement with any software that you re-distribute. It's not quite the GPL that most of us are used to but some people prefer this kind of copyright to anything else. Of the features that are explained in the short guide the following might be of interest to you:

- Code quality and correctness.
- Adherence to the standards.
- Research and innovation.

The target audience is said to be R&D, computing professionals and hobbyists who want a bit more from their software than a crashed computer and a blue screen and no explanation for it. NetBSD is used at NASA's Numerical Aerospace Simulation facility with Alpha machines, which is probably one of the best recommendations for the respectability of the software.

Booting from the first CD you should see the sysinst utility appear on the screen (see Figure 1). You will be asked to select one of the options. Install NetBSD might be a good one. The next screen will ask you whether or not you wish to partition the hard drive. Several other screens follow. If you get confused at this point refer once again to the online manual or download it in whatever format you prefer. You will be asked about several important things to do with installing the software into your hard drive. Make sure that you get this part of it absolutely correct.

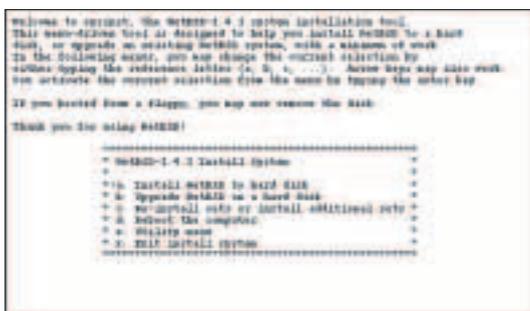
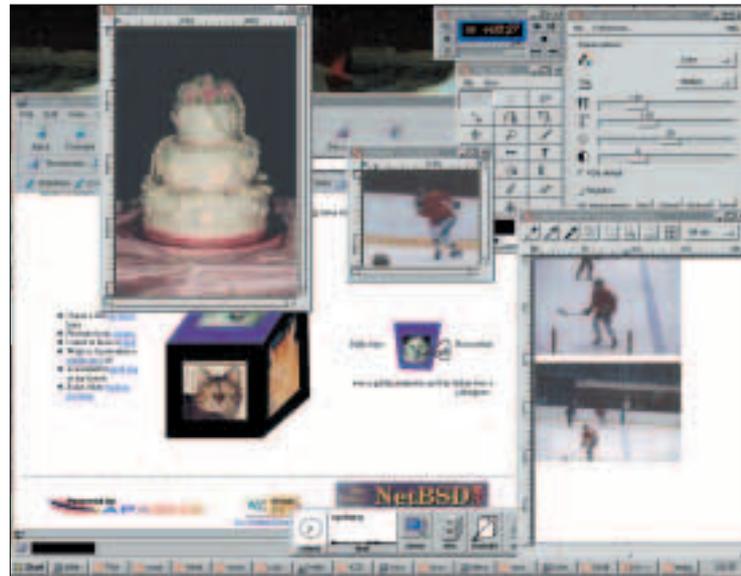


Figure 1: The Net BSD sysinst utility

When you have been through these a screen will appear which will ask you to select the standard installation without Xwindows or another with Xwindows or do you want to make up your own custom installation. At this point you might wish to choose KDE2 or GNOME or Windowmaker for your desktop. Further screens will reveal that the software sets have been extracted and you will be asked to reboot the machine. A successful start up will show that you have hardware such as Ethernet cards or modems installed which will now need to



Multimedia applications on NetBSD

be configured by hand as described in the guide. If you are still confused then why not subscribe to one of the online lists so that you can ask your questions. At this time it is good to consider such things as the */etc/resolv.conf* files or perhaps *hosts.deny*. Do you want to use your new NetBSD computer as a workstation or server or a firewall? Which do you want?

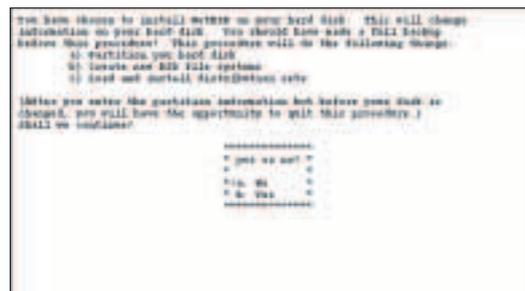
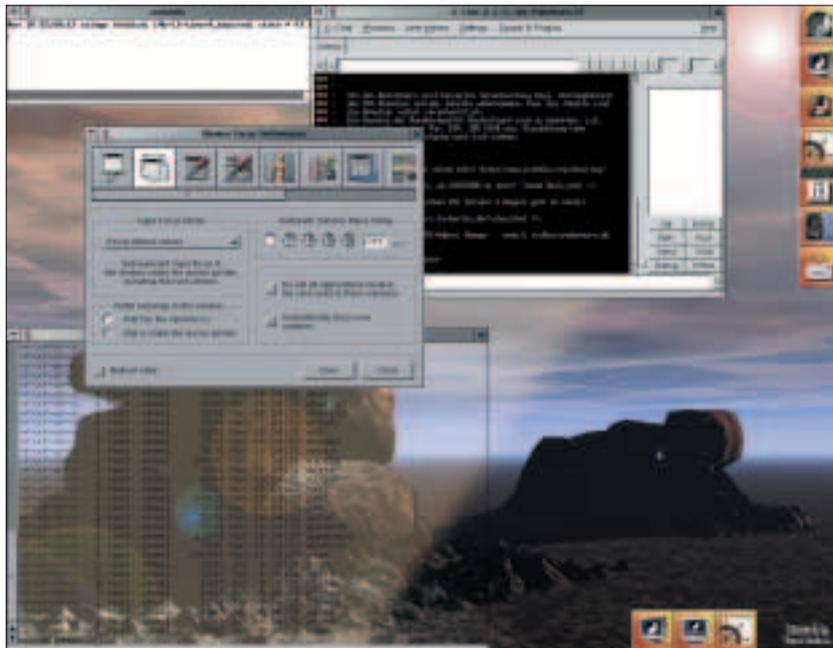


Figure 2: Installing NetBSD correctly



Fun desktops on NetBSD



Working day desktops on NetBSD

Security

As is always the case in present day circumstances the perennial question of network security and the untrustworthy Internet connection come along next. You must have a firewall on your network somewhere if you wish to use the Internet. Fortunately for us the IPF syntax for BSD firewalls are much simpler than those found in iptables under Linux and they can actually be just as sophisticated. The firewall HOWTO is probably one of the best documents on the Internet. You can see the Web address for that document below. A simple intro to IPF begins with...

```
block in all
pass in all
```

and then it goes on in some detail about how to build up chains of rules so that you can be reasonably sure that Grandma's shopping list isn't being read by the wrong people.

The untrusted outward pointing device is the thing

that creates a great deal of interest and discussion. NetBSD works fine with modems, ISDN and ADSL as well as Ethernet cards. My own computer was configured to work with ADSL and after a certain amount of command line adventure at the configuration stage it now works fine. If you do have problems then persevere and ask questions – it's worth the effort. Now that you have an installed and working system you can download updates from the Web with some simple command line arguments. Maintenance is a very simple task, which is carefully thought through by the developers who wrote the software. The package management system is an excellent example of complex technology designed to reduce an update to a no-brainer decision.

NetBSD started out in 1993 with the 0.8 version. At the time of writing the 1.5.2 is in use and there is some talk of another release at some point. Although NetBSD can be used on just about any hardware for the purposes of this review an assumption has been made that the person who installs NetBSD for the first time will use i386 hardware, as this is readily available at sensible prices. Platforms that can be used with NetBSD are: Acorn32, algor, alpha, Amiga, Amigappc, arc, arm26, arm32, atari, bebox, cats, cesfic, cobalt, dnard, Dreamcast, evbsh3, hp300, hpcarm, hpcmips, hpcsh, i386, luna68k, Mac68k, MacPPC, mipsco, mmeye, mvme68k, netwinder, news68k, newsmips, next68k, ofppc, pc532, PlayStation 2, pmax, prep, sandpoint, sgimips, sparc, sparc64, sun2, sun3, vax, walnut, x68k and last but not least x86_64. Quite amazing, eh?

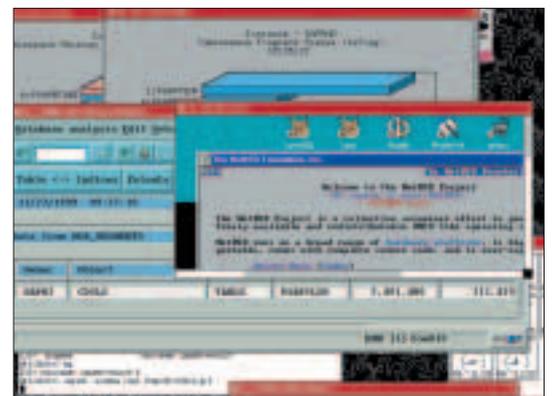
Where can I get NetBSD from?

BSD central might be a good place to start. Linux Emporium also sell a set of CDs. You can also have a look at the NetBSD site for a list of distributors. You might be one of those lucky people who have a broadband connection in which case you can download the whole thing.

For more information have a look at the useful URLs below. Next month we have a look at Open BSD and what it's all about.

Info

NetBSD site	http://www.netbsd.org
Documentation	http://www.netbsd.org/Documentation/
Mailing lists	http://www.netbsd.org/MailingLists/
Linux Emporium	http://www.linuxemporium.co.uk
BDS Central	http://www.bsdcentral.com
The latest stuff	http://www.daemonnews.org
NetBSD with ISDN	http://www.netbsd.org/Documentation/network/isdn/
Net BSD with ADSL	http://www.xsproject.org/speedtouch/
Firewall HOWTO	http://www.obfuscation.org/lipf/lipf-howto.txt



NetBSD in action