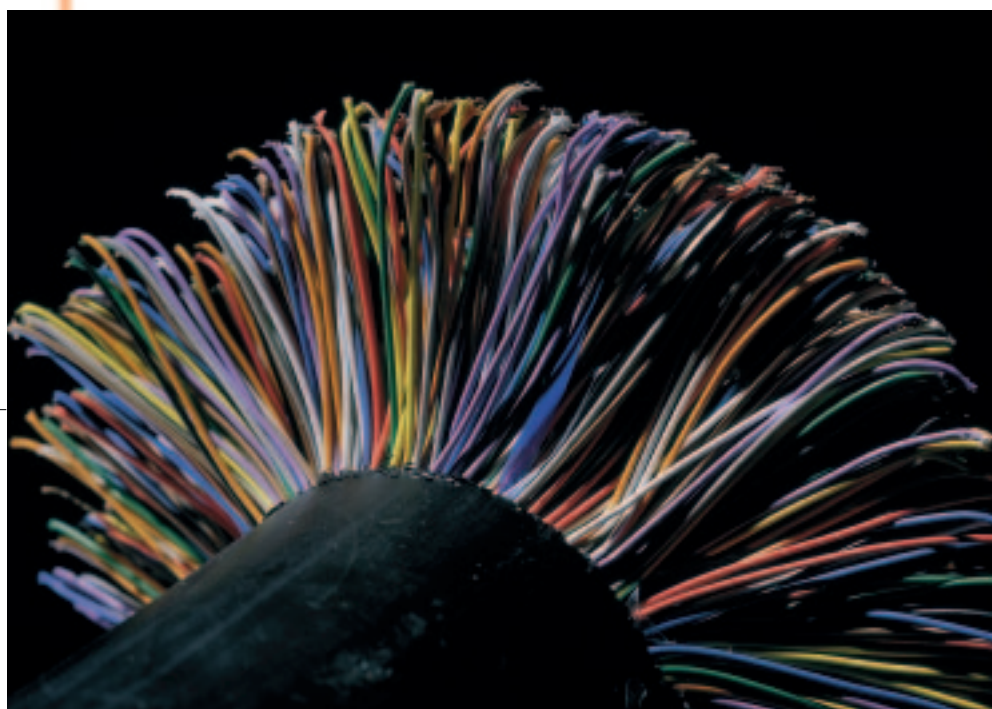


Using the USB cradle

CONNECTING A HANDSPRING VISOR

JOHN SOUTHERN



Backups are a vital necessity for all systems. This feature will show you how to connect a Handspring Visor to your Linux box and so back up your data.

Palm Pilots have been around for quite a while now and come in many forms. These range from the original Pilot to modern Palm VII machines. Originally developed for 3Com by Jeff Hawkins, Palm has become a successful division in its own right. Not completely satisfied with 3Com, three of the original team left and set up their own company, Handspring, to supply Palm devices cheaper and with expansion facilities.

The main difference between Handspring devices to those of Palm is that they have an expansion slot called a springboard and support USB connection when connecting to your PC.

A USB docking cradle is supplied when you buy the device. However the supplied CD-ROM only comes with Win 9x or Mac drivers. Win NT users need to buy a serial docking cradle, but more of that later.

Under Linux it is possible to connect a Handspring Visor using the USB cradle, but some work must first be done.

The first thing to do is to obtain a copy of the mini-HOWTO document Handspring Visor written by Ryan VanderBijl. This is available from <http://www.calvin.edu/~rvbijl39/>. The Visor Linux USB project can be found at <http://milosch.net/visor/>. Read these to familiarise yourself, then off to the task at hand. Firstly, make sure your distribution of Linux contains the Visor module. This is certainly present in Mandrake 7.2. To check if the module is present, open a console under the *root* login and run the following:

```
modprobe visor
```

If the module is not present you will get the answer back that the system cannot locate the module *visor*. If the module is present on your system, it just returns to the command prompt. Once you have a distribution with the Visor module present we need USB support in the kernel. If you are now running the new 2.4 kernel this is included, but if you have an older system then you may require a backported

version. Kernel 2.2.18 now incorporates the USB support as modules. We need to determine which type of USB Host controller is present. Start up a console and type:

```
lspci -v
```

This command, based on ls, will then list all the available options of PCI devices. The line we are interested in is after

USB Controller...

Flags...

The next line is either

I/O ports....

or

Memory at...

The former indicates a UHCI controller while the latter indicates an OHCI controller typical of add-on USB cards. With the OHCI controller you will need a recent kernel (2.4.0-test12 or later). By using *make xconfig*, compile in the kernel the following:

```
CONFIG USB
CONFIG USB_DEVICEFS
CONFIG USB_UHCI          or          CONFIG USB_OHCI
CI
CONFIG USB_SERIAL
CONFIG_USB_SERIAL_VISOR
```

If you want to make the system hotplug compatible add:

```
CONFIG_HOTPLUG
```

Use the following line to make your new kernel image. (note: && is a useful way to enter numerous commands from the same command line entry):

```
make dep && make bzImages && make modules && m2
ake modules.install
```

Before rebooting you now need to modify the */dev* entries. We first need to create a device entry for raw device USB0, unbuffered character special file, major number 188, minor number 0 and another entry for raw device USB1, unbuffered character special file, major number 188, minor number 1:

```
mknod /dev/ttyUSB0 c 188 0
mknod /dev/ttyUSB1 c 188 1
chmod 666 /dev/ttyUSB*
cd /dev
ln -s /dev/ttyUSB1 pilot
```

If you want to use ColdSync then you also need to map in Palm with:

```
ln -s /dev/ttyUSB1 palm
```

Within */etc/fstab* using a text editor add:

```
none /proc/bus/usb usbdevfs defaults 0 0
```

Now reboot. To test the system we will use *pilot-link*, which can be found at <ftp://ryeham.ee.ryerson.ca/pub/PalmOS/> We now start a console window and with the Visor docked press the HotSync button, then type:

```
pilot-xfer -b visorbackup
```

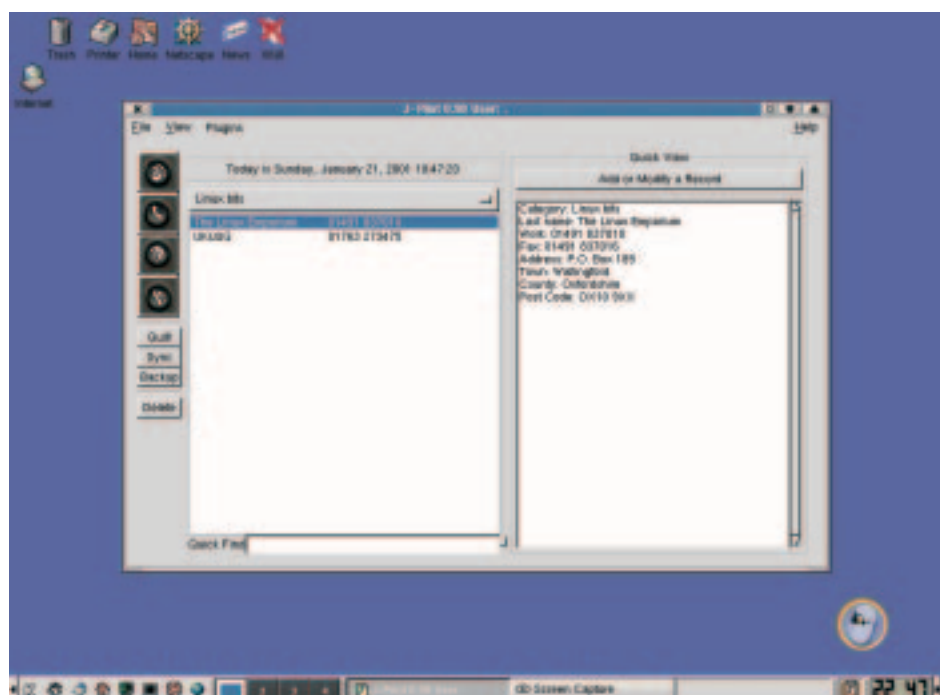
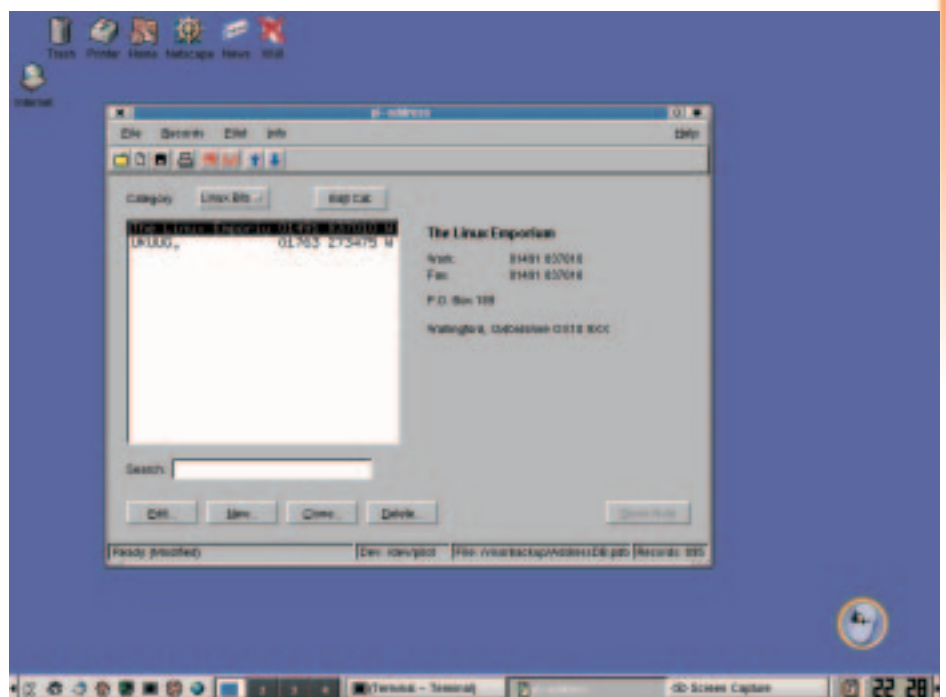
This will make a full backup of the Visor into the directory *visorbackup*. If you only want to back up certain databases use the option *-f* and the database name such as:

```
pilot-xfer -f AddressDB
```

We have safely backed up the data and can stop worrying about losing all the work that went into creating the Visor databases. Now we can look at what software is available on your Linux machine to use the data. We could import the databases into a text editor but they are not very readable.

[below]
Pi-address: Full control of the Addressbook

[bottom]
J-Pilot: All four main programs in one package



Pi-address

The first I would recommend is pi-address. This is available at <ftp://ftp.belug.org/pub/user/mw/pilot/>. By opening the backed up database we have full access and control of the Addressbook.

J-Pilot

Next is J-Pilot which is conveniently placed in the KDE menus under *Applications/Communications*, it is available from <http://jpilot.org/>.

Upon first using this package do not be surprised if no data is visible as it looks in */.jpilot/* for the databases. J-Pilot is not just for the Addressbook database, it is capable of handling the Datebook, To Do lists and Memos.

Gnome-Pilot

This is a daemon-containing package to monitor any Palm device as it is connecting. It is available from <http://www.gnome.org/65348/gnome-pilot/>.

Xcopilot

This package is now known as POSE (Palm OS Emulator). It is a Palm emulator that runs under X. It is available from

<http://www.palmos.com/dev/tech/tools/emulator/>.

To run this program you need a copy of the ROM image from the Visor. Instructions for extracting this are available at

<http://www.thehaus.net/AltOS/PalmOS/ht-visorrom.shtml>.

Kpilot

Kpilot is again software to replace the Palm Desktop software. It is now up to version 3.2.1 and is available at

http://www.slac.com/pilone/kpilot_home/. The

software uses conduits, which allow Kpilot to exchange data with other programs such as Korganiser.

PilotManager

Written in Perl this is again a graphical program suite. It uses a Hotsync daemon and by using conduits, it is capable of many data exchange formats. Many conduits have been written including Syncmidi (used to change the Datebook alarm), SyncBBDB (using the Addressbook for emacs) and MALSync (an interface for the Avantgo system). PilotManager can be downloaded from <http://www.moshpit.org/pilotmgr/>.

ColdSync

This is a console only program that takes the pain out of syncing the Visor. A fastsync facility can be used that only takes changed files. Conduits make it extendable. Version 1.4.6 is available.

ColdSync can be downloaded from <http://www.ooblick.com/software/coldsync/>. To perform a back up with ColdSync use the following command:

```
coldsync -mb visorbackup -p /dev/ttyUSB1
```

Linux Palm desktop

This is an Open Source project to add the Palm OS connectability to Applixware via Shelf. It is available at <http://shelf.sourceforge.net/>.

Finally using the Serial Cradle

The Handspring Visor serial cradle is sold separately and, apart from the connector, looks identical to the USB cradle. With Pilot Link the command is simply:

```
pilot-xfer /dev/tty0 -f AddressDB
```

This is not as quick as the USB method but if you also run NT you have no choice but to use the serial cradle. ■

[left]
Kpilot: Memo screen
[right]
PilotManager: Simple
configuration

