Linux Chinese HOWTO English Version

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This document demonstrates how to implement Chinese available on Linux system, including those common problems encountered on Linux/UNIX system while using Chinese, the ways to obtain, and shows how to install and setup a variety of different Chinese softwares. Finally, we would like to take a bit little glance at the work for making a complete Chinese environment with Linux system.

5.Chinese X Window System

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1.Foreword

1.1 Introduction

NOTE: I write the document to help novices. However, if it didn't, that's *your* problem, not *mime*! Don't complain that I WASTE your time, because nobody has to answer your questions, and nobody has to write documents to help you! You have been warned.

This is a document, as a part of Chinese Linux Documentation Projects, introduces the progress in fulfilling Chinese on Linux. The special point different from the other CLDP documents is that this HOWTO document, in turn, will be the first one and also *the only* one written in Chinese first and then translated into English later.^_^

I have been made my best effort to ensure the exactness of this document, though; however, I couldn't give a guarantee for myself that all the operations and configurations can execute exactly and smoothly on your system. If any problems or losses have happened to your own system because of the executable examples issued in this document, which you have been followed, the authors, us, *won't* be in charge of any responsibility.

The basic purpose carried with this document is to enormously reduce the questions repeated again and again, just like "Why can't I input/see Chinese?", "Why can't I set xxx up?" and so forth, occurred on Internet. In fact, it is impossible as I knew it...

1.2 Awareness

The shell program used in this document will be sh/bash. If other system(such as csh/tcsh) is your choice, you need to pay attention to the differences amongst them. On the configuration of environment variables, for instance, usage for sh/bash will be,

```
# export TERM=vt100
```

whereas for csh/tcsh ,

```
# setenv TERM vt100
```

1.3 Newest Version

Simultaneously, I provide the following various formats of different versions due to the mechanism of SGML document formats.

- Plain Text
- HTML
- PostScript
- SGML

You can download these formats from the ftp site ftp://ftp.phys.ntu.edu.tw/pub/CLDP/howto−translations/.

Also, you may read directly the newest version of this document on line.

- http://www.phys.ntu.edu.tw/~cwhuang/pub/os/linux/CLDP/Chinese−HOWTO.html
- HomePage for Chinese Linux Documentation Projects

English version could be obtained from:

- http://sunsite.unc.edu/LDP/HOWTO/Chinese−HOWTO.html
- http://www.phys.ntu.edu.tw/~cwhuang/documents/linux−howto/Chinese−HOWTO.html

Japanese translation is also available at(thanks to `isaji@mxu.meshnet.or.jp`):

- http://jf.gee.kyoto−u.ac.jp/JF/JF−ftp/other−formats/Chinese/Chinese−HOWTO.html
- ftp://ftp.kuis.kyoto−u.ac.jp/Linux/JF/other−formats/Chinese/

1.4 Copyright and Announcement

1.5 Goal

I wish this document can offer a complete and self−sufficient explanation in the aspect of using Chinese on Linux system. What matters concerned with implementations of Chinese on Linux will put it all together here! However, limited to the intelligence and private ability, the ultimate goal of my willingness is almost a "mission impossible"; therefore, if there are losses or drawbacks in it, please let me know it.

1.6 Acknowledgement

I want to thank to Hong Zhang < zhangh@earthlink.net> for being the original founder of this Chinese HOWTO document and for his papers of being the foundation of this new version. Also, I need to thank to Cd Chen < cdchen@linux.ntcic.edu.tw> for completing the section Display and Input Chinese.

The translator, Frank_J.S._Chen < frank63@ms5.hinet.net>, also deserved the acknowledgments for translating this document into English.

Here, there are many people ought to be acknowledged much better for the reasons of devoting their efforts to make Linux more reliable in Chinese. Because of their hard works, we can nowadays enjoy ourselves on a

comfortable Chinese environment of Linux.

1.7 Words from The Translator−−Frank J.S. Chen

This work begins on 1/8/98 and ends on 1/11/98, which I call the version of 0.1, as I always did for the initial states of anything. I appreciate the hard work of Chinese version for its delicate statements and not leaving out any detail in the field of Chinese practices. The more I translated, the more I learned. After examining all the sentences I've made, there are definitely many of them won't like real American−English, or the so called Chinese−styled English. Well, if you are skilled in this field of translation or are interested in the circle of computers science, anything about this English article, just like grammar, writing, internationalization of locale with Linux, translation, programming with C/C++, and so forth, will be sincerely grateful and excessively welcome, too.(1/11/98, modified on 6/2/98) This is the secondary modification of it, focusing on the falses of typing, incorrect grammar, and correcting the meanings of ambiguous words(maybe a little research on sematics, just for this document:−)). I have no ideal about the translating quality of this paper, if you feel something strange or ill while reading, please let me know about it in my real heart. Pointing out the bad parts will be marvelous in spreading out this howto. As far as I know, English version of it had been translated into several foreign languages including Japanese, Swedish, etc. If you want to do another one, just go ahead, but we suggest you to inform anyone of us about that.(6/2/98)

2.Difficulties of Using Chinese on Linux System

This section makes an attempt to do a general description for the possible obstacles in using Chinese on Linux; then you could find the key points out much easier as you meet with these problems. As a matter of fact, the shortcomings described here not only appear on Linux but also the other system. Even more, we can say that the whole computers environments are concerned. If this section is not suited for your tastes or you are eager to act directly, then you can jump onto the section Display and Input Chinese!

A Chinese word is composite of two bytes in computers, as we all know. The most popular encoding methods includes BIG5 codes available in the area of Taiwan and GB codes available in the mainland China. The first byte of each word is almost bigger than numeric values 128, which is what we called the non−ASCII codes.(The ASCII codes means codes smaller than 128.)

Yes! Then so what? Here are the points! Because of different kinds of reasons, in the early days, many programs didn't consider the possibility of non−ASCII codes as a part of entering data.

These kinds of programs always assume that the data prepared to manipulation are all limited in the range of ASCII codes, and the most worst is that when they meet with non−ASCII codes, an assumption of their non−existence and a truncation of the 8th bit is the most frequent method they took. This is the so called 8−bit clean problem.

Your program, for example, always take it for granted that your inputs are all the 7−bit−width ASCII codes. When you enter Chinese words, it will erase the 8th bit so that the inputs under circumstances of Chinese will become disturbed codes all the way.

Communication programs on Internet are usually could only transmit 7−bit data. A notorious substance is the earlier `sendmail` program. `sendmail` could only send and receive 7−bit mails, causing that the strategies of many odd encoding methods, Encoding which made the receivers an excessive disturbance, are recognized as sending out Chinese mails(like uuencode, base64, QP and so on). (Frequently, I thought by myself that if the founders of emails could have put much foresight on it, then we could have little problems nowadays perhaps.)

This problem seems to be more complicated on Internet. Even you and your receivers all have the machines installed with `sendmail` program which might manipulate with Chinese mails, the receiver might get disturbed mails in any way. This is because this mail before its arrival at the target may travel over several hosts settled on Internet, if one of the hosts' `sendmail` cuts the 8th bit off, then things go down. For the programs with the architecture of client/server, the problem may be on the end of client, or on the end of server; otherwise both of them are.

Applications which are incapable of identifying the Chinese encoding are also a major problem, apart from being unable to deal with non−ASCII codes' data. That is, most programs(even if they can deal with 8−bit data accurately) all take a Chinese word as two individual bytes. This won't cause problems under some conditions, but it will show an unfortunate disaster under some spots.

The most obvious matter is that, for instance, even if you can input Chinese words properly, but when you hit the backspace key a time trying to delete a complete word, the whole word will be split into wto parts meaning that only one byte(column) can backspace on monitor and the redundant half one then become a disturbed code. More over than that, you might change new line at the second byte of a Chinese word in some text editors and then disturbed codes occurred. Besides, these text editors might think that a long Chinese sentence as a long English sentence without changing to a new line, making the picture of screen ugly and chaotic.

There are more worse matters, too ! Some Chinese words contain special codes which correspond to some particular meaning for some applications and might make these programs producing severe faults while meeting with that codes or just collapse.

Here below will try to propose some resolved methods but segmental, incomplete and also unsatisfactory. Only when all softwares can fit with Chinese, then the problems could really resolve perhaps.

However, more and more programs have noticed the significance of internationalization, for example, most hosts' `sendmail` programs now can cope with 8−bit mails exactly −−− Not only transmitting Chinese mails need 8−bit, but also many multi−media mails need 8−bit. Lots of softwares already don't need to modify at all or just open some special options for the purpose of using Chinese. Simultaneously, there are more and more persons devoting to the birth of Chinese softwares. Let's us wait and expect for it.

3.Where to Get Chinese Softwares?

3.1 Websites for Chinese softwares

Most of the Chinese softwares issued in this document can get from these sites below:

- ftp://linux.cis.nctu.edu.tw/
- ftp://linux.csie.nctu.edu.tw/pub/chinese/
- ftp://chinese.linux.org.tw/pub/Chinese/
- ftp://NCTUCCCA.edu.tw/Chinese/ifcss/software/
- http://cnapps.ifcss.org/
- http://irpslibrary.ucsd.edu/software/chinese_software/index.html

3.2 Using Archie

There are usually some ordinary questions such as "Where can I find xxx...?" appeared on Internet. Actually, there was an excellent utility named archie could help you to search softwares you needed. Make a link to http://archie.edu.tw/archie.html, and then enter the name of softwares that you want. If you have a desire to use `xcin`, for instance, just input xcin can you get all these softwares concerned with xcin displayed on screen. Then, choose the nearest site to download those softwares. More illustrations in detail can be found on the archie's homepage for self−reference.

You can use text mode, too. `telnet archie.edu.tw` and login as `archie`, then type `prog FILENAME` and press ENTER key, for instance,

```
Archie > prog xcin−2.1d.tar.gz
# Search type: sub.
# Your queue position: 1
# Estimated time for completion: 5 seconds.
working... =

Host linux.cis.nctu.edu.tw    (140.113.166.117)
Last updated 08:47 27 Nov 1997

    Location: /packages/chinese/xcin
      FILE    −rw−r−−r−− 1106789 bytes  08:58 25 Jul 1997  xcin−2.1d.tar.gz
```

4.Display and Input Chinese

For environments of Chinese system under DOS or of Windows 95 for Chinese that you have been always using to get through Linux hosts, there is no doubt that you don't need to take a good look at this section. However, when your local host is Linux−based system, configurations for Chinese system are definitely necessary.

4.1 xcin+crxvt

It is truly suggested that you can take the combinations of xcin and crxvt as a pathway to solve the problems of Chinese I/O if the X Window System is acquainted with you.

Xcin, with a contraction of X Window Chinese INput, is a Chinese Input System executed under the X mode. Because xcin is utilizing the architecture of client/server, all you have to do is just to start one xcin window so that you can manipulate with many crxvt virtual terminals under the same window, which can exhaust much little resources. Also, it offers some wise programs of input, like Wang−Hsing Input or Natural Input, which can select the matching phases by themselves. In the early age, in order to convert fonts and inputs table to fit with xcin, you need the ETen Chinese System mounted first before the installation of xcin. After the man, Tung−Han Hsieh, < thhsieh@twclx.phys.ntu.edu.tw> became responsible for the voluntary maintenance of xcin, this terrible problem had been resolved!

The newest version is 2.3.02 now. But this one is just a version of beta. For the more stable one, I advise you to fetch the xcin−2.1d for a suggestion in my mind.

Getting the software

Download the sources of xcin from this ftp site below:

> ftp://linux.cis.nctu.edu.tw/packages/chinese/xcin/xcin−2.1d.tar.gz
> ftp://linux.cis.nctu.edu.tw/packages/chinese/xcin/xcin−2.3.02.tar.gz

Installation of xcin

You need the xcin−2.3.02.tar.gz file at hand first to setup xcin of version 2.3.02 and untar and unzip it under any certain directory.

```
# tar xzvf xcin-2.3.02.tar.gz
....
# cd xcin-2.3.02
# ./configure (Follow the instructions on screen to modify the options you picked up in turn.)
# make
# make install
```

So, you have finished the setup of xcin of version 2.3.02 from now on.

You can also get the same sort of xcin, named xcin−2.3.02.i386.rpm, maintained by Cd Chen for RedHat Linux System.

> ftp://linux.ntcic.edu.tw/personal/cdchen/Chinese−RedHat−Packages/XCIN/RPMS/xcin−2.3.02−1.i386.rpm

Install it by

```
# rpm -Uvv xcin-2.3.02-3.i386.rpm
```

4.2 yact

yact is the system of displaying and inputing Chinese running under the terminal mode. The most different point from chdrv is that yact uses your computers' displaying card through svgalib library. Without the information of your video card contained in the svgalib, you may not probably make yact work on your Linux.

The most admirable point for yact is that the fonts are scanned with 24x24 on the monitor and are more beautiful than other terminal Chinese input system. And it is more smooth than the others in dealing with scrolling pages. The newest version of yact is yact−p4 now.

You can get yact here below,

> ftp://linux.cis.nctu.edu.tw/packages/chinese/yact/yactp4.tar.gz

The ways to setup yact are simple, too. After getting the sources of yact, decompress it and examine whether the Makefile file is correct or not, then type make all install directly on shell prompt to complete the installation of bits files. Read the README file for more detailed information.

Next is the step of fonts' setup. yact uses the HBF fonts, but you can't find the fonts in the packages of yact, which means you need to take extra actions to make it available. Having ETen Chinese System mounted is an original recommendation from the founder for its fonts. Copy the HBF fonts' description file `et24.hbf` under the fonts directory of sources of yact to the directory `/usr/local/lib/yact` and rename it as `hzfont.hbf`. Then copy STDFONT.24, SPCFSUPP.24, SPCFONT.24 and ASCFONT.24 fonts files to the directory `/usr/local/lib/yact` and rename ASCFONT.24 as `12x24`.

The free HBF fonts are available, too. Change names of these 256 ASCII fonts as `12x24` and names of the HBF fonts' description file as `hzfont.hbf`. Put both of description files and fonts files into `/usr/local/lib/yact`, then everything will be ok.

4.3 bcs16

Because yact needs the svgalib 1024x768 mode to work, many netters without ET4000 series cards cannot get well supports from it, causing their sickness of this excellent Chinese system. The bcs16 is modified from yact according to this drawbacks. It needs only 640x480 and can work very well on most video cards.

Get bcs16 from this site:

> ftp://linux.cis.nctu.edu.tw/packages/chinese/bcs/bcs007a.tgz

Installation

- Decompress and compile it to setup

```
# tar zxvf bcs007a.tgz
# cd bcs16
# make
# cp bcs16 /usr/local/bin
```

- bcs16 take yact's input table as default and this is the reason that you must setup yact first before bcs16 can work. However, version of v0.05 or laters have been emerged with the support of individual Boshiamy input, so if you don't need other inputs provided from yact, you don't need to install yact first. Just fetch Boshiamy input table, `liubig5.tab`, of DOS version and put it into the directory `/usr/local/lib/yact` .
- Put files under directory `data` into `/usr/local/lib/yact` and all the legal fonts files, namely `spcfont.15`, `spcfsupp.15`, and`stdfont.15` , are need to put together in the same place, too.
- If you want to see GB codes or Japanese or Korean, get fonts `cclib.16.gz cclib.16a.gz`, `jis.16.gz`, `ksc.16.gz` from the site below and decompress them into `/usr/local/lib/yact`.

  ftp://nctuccca.edu.tw/Chinese/ifcss/software/fonts/

- If you have the files of creating fonts or sets of Sea−Fonts, you can copy them to the directory `/usr/local/lib/yact/usrfont.15m` too.
- Execute `bcs16`. Pressing `Alt−H` can get more advanced explanations of instructions.

The founder of bcs16 is cnoize.bbs@bbs.cis.nctu.edu.tw.

4.4 chdrv

chdrv is a Chinese emulator program displaying and entering Chinese through console. Because chdrv access the tty device directly, it must be activated by the root. Now, chdrv is maintained by Yu−Chung Wang < wycc@iis.sinica.edu.tw> and the newest one is chdrv−1.0.10.

Getting chdrv

You can get it from

> ftp://linux.cis.nctu.edu.tw/packages/chinese/chdrv/

Get the source package, chdrv−1.0.10.tar.gz, binary package, chdrvbin−1.0.10.tar.gz, and fonts package, chdrvfont.tar.gz, respectively.

Installation of chdrv

Unzip and untar the compressed binary file,

```
# tar xvzf chdrvbin-1.0.10.tar.gz
# mv chdrvfont.tar.gz chdrv-1.0.10/
# cd chdrv-1.0.10
```

Read the illustrations for installation in file `INSTALL.1.0` to modify file `install`. If you want your shadow password to works, you need to change the settings in `chinese.conf`. Erase the following comments off,

```
LOGINPROGRAM /bin/telnet
```

Freeze this line into remarks,

```
LOGINPROGRAM /bin/login
```

Now, you can execute the installation script.

```
# ./installbin
```

4.5 cxterm

cxterm is a Chinese virtual terminal running under X Window System, and is the oldest Chinese displaying and inputing virtual terminal, which is provided various codes for Chinese, including BIG5 codes, GB codes, HZ codes and so on. Because each cxterm opened needs to load Chinese data into the main memory, system resources are exhausted quite largely for it.

Getting cxterm

The newest one is version of 5.0.p3 named `cxterm5.0.p3.tar.gz`, which contains both of cxterm codes and Chinese fonts. You can get it from here below,

> ftp://ftp.ifcss.org/pub/software/x−win/cxterm/

Or the rpm at `ftp.redhat.com`: `cxterm-color-5.0p3-1.i386.rpm`, `cxterm-color-big5-5.0p3-1.i386.rpm`, `cxterm-color-gb-5.0p3-1.i386.rpm`.

> ftp://ftp.redhat.com/pub/contrib/hurricane/i386/

Installation of cxterm

Decompress the packed,

```
# tar -xvzf cxterm5.0.p3.tar.gz
```

The upper instruction will produce a new directory `cxterm-5.0`, and then invoke instructions as follows:

```
# cd cxterm-5.0
# ./config.sh
```

You need login as root to execute ``./config.sh" if you wish all users on your computer can use cxterm well, then you can finish the steps of setup following the descriptions below:

```
  0. Read COPYRIGHT Notice
  1. Compile, Install, and Configure "CXTERM 5.0" in One Step

  2. Compile cxterm (not to install)
  3. Install cxterm (after successful compilation in 2)
  4. Install additional Chinese font(s) for your X window
  5. Configure your account for using cxterm (after installation in 3)

  x. Exit
Please choose (0/1/2/3/4/5/x) :
```

If you wish all things going through automatically, please choose 1, and then enter the name of directory where to store the cxterm. If asking me, I will suggest this place, /usr/local/chinese¡D There are two kinds of Chinese fonts coming with the packed package, choosing 1 and 3 will make the procedure of installation all automatic. In addition, you can select 4 to install some extra fonts, too. After achieving this setup, you need to put cxterm and CXterm into the path of searching directory.

```
# export PATH=$PATH:/usr/local/chinese/bin
```

CXterm is just a shell script to load the resources of X and cxterm in. For using GB codes, invoke this following command,

```
# CXterm -gb
```

For BIG5 codes, invoke this following command,

```
# CXterm -big5
```

Color patch of CXterm

On the websiteftp://ftp.ifcss.org/pub/software/x-win/cxterm, there is a color patch for cxterm as well. Using this patch can make cxterm showing colors of ANSI. Assuming that you put the original files of cxterm under the /tmp/cxterm-5.0, then

```
# cp cxterm-5.0.p3-color.patch.gz /tmp
# gzip -d cxterm-5.0.p3-color.patch.gz
# patch < cxterm-5.0.p3-color.patch
# cd cxterm-5.0
# ./config.sh
```

4.6 XA (Xcin Anywhere)

XA is a small tool of an abbreviation for Xcin Anywhere, which can let you enter Chinese words with xcin under any common X−based softwares. If making XA coordinating with CXWin(or XA+CV), you can get an environment of accessing Chinese for softwares not supported with Chinese. Thus, the xterm will become cxterm−like naturally. Cool, doesn't it? XA is now extremely unstable as though, and you have to take charge of all risks if you want to explore it. As most things do, before working with XA, you must make xcin installed first. You can pick XA up into your pocket from here below:

> ftp://linux.cis.nctu.edu.tw/packages/chinese/xcin/XA/

Decompress the packed. Run `./configure` to produce `mk` and `config.h` on account for the compilation by using `./mk`. If it works, key in `./mk test xterm` next to see if the xcin can be called out and enter Chinese under xterm to test. If there is no problem, copy `wrap.so` to `/usr/local/lib/` following the syntax below:

```
# LD_PRELOAD=/usr/local/lib/wrap.so netscape &
```

Then, just follow the general method of using xcin.

Founder of XA is weijr.bbs@bbs.ntu.edu.tw.

4.7 New Added Inputs

At present, there are two common formats of input table, namely `tit` and `cin`, which both are plain text of formats. (That's means you can edit them directly from text editors.) However, most Chinese Systems almost provide utilities for the purpose of exchanging pure text of formats into special binary of formats in order to speed up searching method. Before you setup some certain input, you must own it's `tit` , `cin`, or formats after transformation first .

I will take the Bo−Shia−My input as an example to show how to add it under each kind of Chinese system. The input tables mentioned here can be found at`ftp://ftp.cis.nctu.edu.tw/UNIX/Chinese/Boshiamy/`.

Other `tit` files are also available at `ftp://ftp.ifcss.org/pub/software/x−win/cxterm/dict/`.

xcin

Make use of utility `cin2tab` provided from xcin to transform the `cin` table into `tab` one.

```
# cin2tab boshiamy.cin
```

It will produce the two files: `boshiamy.tab` and `boshiamy.tab.rev`. Put them into the directory of xcin and activate xcin next:

```
# xcin -in9 boshiamy.tab
```

To use Bo−Shia−My input, press the combination keys `CTRL−ALT−9`.

yact & bcs16

yact takes the use of cit of version 2, and the same as cxterm. You can use the tool `tit2cit` accompanied with yact to make transformation available between `boshiamy.tit` and `cit`.

Move `boshiamy.cit` into `/usr/local/lib/yact` and establish a symbol link for it:

```
# ln -s boshiamy.cit 9
```

Like xcin does, Hit `CTRL−ALT−9` for calling Bo−Shia−My input.

chdrv

At first, put `boshiamy.tbl` into `/usr/local/lib/chinese`. Secondly, modify `/etc/chinese.conf`, adding the follow section `INPUT` into it.

```
BEGIN INPUT
PHONETIC /usr/local/lib/chinese/phone.def
MULTI /usr/local/lib/chinese/boshiamy.tbl
END INPUT
```

Finally, use utility `chconfig` of chdrv to make the contents of `/etc/chinese.conf` effective.

cxterm

Change `boshiamy.tit` into `cit` or `citnf` with the utility `tit2cit` of cxterm, then modify `.Xdefaults` to set a combination key for acting Bo−Shia−My input. Please refer to the technical document coming with cxterm for more information about installation and implementation in detail.

4.8 Problems coming with input

After you accomplished the establishments of Chinese System, you have already been able to display Chinese on your Linux through monitors. However, as using a Chinese editor, you will find that the Linux system can only display Chinese but cannot accept the input of Chinese. You have to modify two spots, by yourself, to make Linux system becoming acceptable with output and input of Chinese if you want to improve these problems At beginning, you need to add the locale setting to the shell profile file (Referring to the locale mini–HOWTO when concerning with locale). Additionally, adding sets about inputs for the `.inputrc` file under your home directory is necessary too. (Please create it yourself if `.inputrc` didn't ever exist.) Here are the configurations concerning with shell profile file and `.inputrc` file which are distributing on public domain(just as a reference, though):

Bash Shell: Appending the following contents into `/etc/profile`, please.

```
stty cs8 -istrip
stty pass8
export LANG=C
export LC_CTYPE=iso-8859-1
```

Tcsh Shell: Appending the following contents into `/etc/csh.login` or in `/etc/csh.cshrc`, please.

```
stty cs8 -istrip
stty pass8
setenv LANG C
setenv LC_CTYPE iso-8859-1
```

`$HOME/.inputrc` file for setup lists as follows:

```
set convert-meta off
set output-meta on
```

Eventually, prepare a text file contained with Chinese words by yourself, and use tool `grep` to search it. If it can find something exact, this means that your Linux system can work with Chinese words already.

5.Chinese X Window System

X Window System is a software with powerful environment of graphical user interface under UNIX System. XFree86 is a modified version from MIT X Window System and also freely distributed.

5.1 CXWin

The Chinese X, abbreviated with CXWin, is really a patch of XFree86, making it can show Chinese words under X Window System. Founder of it is srlee. CXWin only support BIG5 code at present, and can let you be possessed of Chinese pop–up menus, of Chinese titles of windows, and of showing Chinese under a variety of window managers and applications.

How to get it?

You can get CXWin 3.3 from this ftp site below:

> ftp://linux.cis.nctu.edu.tw/packages/X/Xserver/CXwin/3.3/

If you use XFree86 3.2, you can get the Linux ELF format of version 3.2.

> ftp://linux.cis.nctu.edu.tw/packages/chinese/CXwin/binaries/

All you need is to get the corresponding X server. For example, if your video card is matched with `XF86_SVGA`, just take `XF86_SVGA.gz` home. `XF86_SVGA.gz` should work properly on most video cards.

If you system is compatible with rpm, you can get the newest CXWin 3.3.1 of rpm.

> ftp://linux.cis.nctu.edu.tw/packages/X/Xserver/CXwin/3.3.1/

Patches

You can get the patches at the same place to compile to binary files by yourself if you've got the sources of XFree86.

Installation

Make sure that you have these shared libraries if your choice is CXWin 3.3 (You can use `ldconfig -p` for an observation):

```
libm.so.5 => /lib/libm.so.5.0.6
libdl.so.1 => /lib/libdl.so.1.7.14
libc.so.5 => /lib/libc.so.5.3.12
```

If your choice is CXWin 3.2, then you need the libc of version 5.2.18 or newer.

First, unzip the compressed files of gzip.

```
# gzip -d XF86_SVGA.gz
```

Duplicate the original X server as a copy as the root identification.

```
# cd /usr/X11R6/bin
```

```
# mv XF86_SVGA XF86_SVGA_BACKUP
```

Put the decompressed CXWin into the exact place and create the decent symbolic link:

```
# mv /tmp/XF86_SVGA /usr/X11R6/bin
# chown root.bin XF86_SVGA
# chmod 4755 XF86_SVGA
# ln -sf XF86_SVGA X
```

If your choice is rpm, then everything is more simple and more compact.

```
# rpm -Uvv XFree86-SVGA-3.3.1-1c.i386.rpm
```

CXWin needs the following *four BIG5 fonts* to work normally: `taipei15`, `taipei16`, `taipeik20` and `taipeik24`. Install these Chinese fonts in accordance with the method of next section.

5.2 Installation of Chinese fonts

Where to get these fonts?

Maybe you have already installed some Chinese fonts; for GB fonts, you can find them out through the next way:

```
# xlsfonts | grep gb
-cclib-song-medium-r-normal--0-0-72-72-c-0-gb2312.1980-1
-cclib-song-medium-r-normal--16-160-72-72-c-160-gb2312.1980-1
-isas-fangsong ti-medium-r-normal--0-0-72-72-c-0-gb2312.1980-0
-isas-fangsong ti-medium-r-normal--16-160-72-72-c-160-gb2312.1980-0
-isas-song ti-medium-r-normal--0-0-72-72-c-0-gb2312.1980-0
-isas-song ti-medium-r-normal--16-160-72-72-c-160-gb2312.1980-0
-isas-song ti-medium-r-normal--24-240-72-72-c-240-gb2312.1980-0
hanzigb13fs
hanzigb13st
hanzigb16fs
hanzigb16st
hanzigb24st
```

The last five fonts are the previous five ones' aliases. To check the installed BIG5 fonts, using

```
# xlsfonts | grep big5
-kc-kai-medium-r-normal-fantizi-0-0-75-75-c-0-big5.eten.3.10-1
-kc-kai-medium-r-normal-fantizi-20-200-75-75-c-200-big5.eten.3.10-1
-kc-kai-medium-r-normal-fantizi-24-240-75-75-c-240-big5.eten.3.10-1
-kc-ming-medium-r-normal-fantizi-0-0-75-75-c-0-big5.eten.3.10-1
-kc-ming-medium-r-normal-fantizi-15-150-75-75-c-160-big5.eten.3.10-1
-kc-ming-medium-r-normal-fantizi-24-240-75-75-c-240-big5.eten.3.10-1
```

```
-uw-ming-medium-r-normal-fantizi-0-0-75-75-c-0-big5.eten.3.10-1
-uw-ming-medium-r-normal-fantizi-16-160-75-75-c-160-big5.eten.3.10-1
-uw-ming-medium-r-normal-fantizi-20-200-75-75-c-200-big5.eten.3.10-1
-uw-songti-medium-r-normal-fantizi-0-0-75-75-c-0-big5.eten.3.10-1
-uw-songti-medium-r-normal-fantizi-20-200-75-75-c-200-big5.eten.3.10-1
-uw-songti-medium-r-normal-fantizi-24-240-75-75-c-240-big5.eten.3.10-1
```

You can take all of it from this ftp site`ftp://ftp.ifcss.org/pub/software/fonts/` if you haven't installed any of them or if you want more of them. The `gb/bdf/` amongst them is a GB font while the `big5/bdf` is a BIG5 font.

Installation of X fonts

Assuming that you have already got a BIG5 font, `eb5-24k2.bdf.gz`, and a GB font, `gb24st.bdf.gz`. What you have to do first is that changing them into the format of `.pcf`.

```
# gzip -cd eb5-24k2.bdf.gz | bdftopcf -t > eb5-24k2.pcf
# gzip -cd gb24st.bdf.gz | bdftopcf -t > gb24st.pcf
# compress *.pcf
```

Then install them under `/usr/X11R6/lib/X11/fonts/misc`

```
# mv *.pcf.Z /usr/X11R6/lib/X11/fonts/misc/
# cd /usr/X11R6/lib/X11/fonts/misc
# mkfontdir .
```

Now it should contain the following two lines in `fonts.dir`:

```
eb5-24k2.pcf.Z -kc-kai-medium-r-normal-fantizi-24-240-75-75-c-240-big5.eten.3.10-1
gb24st.pcf.Z -isas-song ti-medium-r-normal--24-240-72-72-c-240-gb2312.1980-0
```

You can create other aliases for these fonts for the advantages of saving typing time when using Chinese softwares. Add the two lines in `fonts.alias`,

```
gb24st    "-isas-song ti-medium-r-normal--24-240-72-72-c-240-gb2312.1980-0"
taipeik24 "-kc-kai-medium-r-normal-fantizi-24-240-75-75-c-240-big5.eten.3.10-1"
```

Next, tell X Server to reload these fonts,

```
# xset fp rehash
```

If everything is fine, you can use the new fonts now:

```
# cxterm -GB -fn 12x24 -fh gb24st &
```

You can put these fonts into another directory, too, for instance, `/usr/X11R6/lib/X11/fonts/chinese`. If this works, you have to add this line `/etc/XF86Config` to the Section "Files",

```
FontPath    "/usr/X11R6/lib/X11/fonts/chinese/"
```

So, when you start X next time, you can use these fonts without any problems.

Transformations from other fonts to X fonts

There is a TTF2BDF program, written by lwj, can let you transform the TTF fonts of Windows into BDF fonts. You can get it from here below:

ftp://linux.cis.nctu.edu.tw/packages/chinese/TTF2BDF.EXE

This is a Win32 program, thus you must execute it on Windows 95 or NT.

Next step is that change BDF into PCF, then you can use it under X. (You can use BDF directly under X; but that BDF carried with bigger sizes means PCF will be a better choice though.)

```
# bdftopcf -t < ming.bdf > ming.pcf
```

You may change HBF into BDF and PCF fonts, too. Here is the ftp site for the utility of transformation.

ftp://ftp.ifcss.org/pub/software/fonts/utils/hbf.tar.gz

```
# hbftobdf ccfs24.hbf > ccfs24.bdf
# bdftopcf -t < ccfs24.bdf > ccfs24.pcf
```

Other nice font conversion programs are available at:

ftp://crl.nmsu.edu/CLR/multiling/General/ttf2bdf−1.8−ELF.tar.gz
ftp://crl.nmsu.edu/CLR/multiling/General/xmbdfed−3.0.tar.gz

5.3 TaBE & B5LE

TaBE and B5LE(Big5 Locale Environment) are projects both based on locale for solving the Chinese ability under X. If we can finish them, then the problems coming with Chinese I/O under X can be resolved thoroughly.

The TaBE author, shawn, has been taken for the military service in Taiwan, and the homepage of TaBE had been removed either(so awfully?), so this project has been dead from that time.

Author of B5LE is Thinker < Thinker.bbs@bbs.yzu.edu.tw>. However, the major platform is FreeBSD , though. If someone install B5LE successfully on Linux platform, please let me know about it. The concerned homepage is listed as follows:

http://ftp–cnpa.yzit.edu.tw/~thinker/B5LE/

6.Printing for Chinese

This section will teach you how to print Chinese documents, but without the demonstrations of how to set up your printer; that you have to make it all ready by yourself. Tools introduced in this section are all for transformations to PostScript format; hence, you need to set your printer up in order to print PostScript files. If your printer doesn't support PostScript directly, you can install `ghostscript` instead. Please refer to Printing HOWTO.

6.1 cnprint

`cnprint` is a printing tool for the purpose of changing Chinese text files into PostScript format, of which commands are the same as the standard ones. It supports GB, HZ, and BIG5 codes simultaneously.

Where to get it?

Download it from `ftp://ftp.ifcss.org/pub/software/unix/print`, of which name is `cnprint280.tar.gz`.

Setting up cnprint

`cnprint280.tar.gz` contains only five files.

```
# ls
cnprint.1          cnprint.cmd        cnprint280.README
cnprint.c          cnprint.help
```

Compile it through this way below:

```
# gcc cnprint.c -o cnprint
# mv cnprint /usr/local/bin
# mv cnprint.1 /usr/local/man/man1
```

Installing HBF fonts

HBF fonts includes both description files and fonts files. A `.hbf` is the header file describing fonts, with a texture of plain text, recording the file names of its fonts files. Both of two files must be installed yourself. You can find them at `ftp://ftp.ifcss.org/pub/software/fonts/`.

If you want to use `ccfs24.hbf`, for example, which is a sort of simplified Sung−imitated style font, you must obtain these three following files: `ccfs24.hbf`, `cclib.n24` and `ccsym.24`. In the ifcss fonts directory, `00index.txt` lists all HBF fonts' filenames. Establish a specific directory to store HBF fonts, just like `/usr/local/lib/chinese/HBF/`, for instance. Put all HBF description files and fonts files you've got together under this directory, then export the complete directory pathname for HBF out of environmental variables.

```
# export HBFPATH="/usr/local/lib/chinese/HBF/"
```

This file `cnprint.cmd` contains some default values for `cnprint`, that you have to fix them up to point to the HBF fonts you have installed, and then export it to `$HBFPATH`.

```
# cp cnprint.cmd $HBFPATH
```

Now, you can use ``` ``cnprint −w FILENAME" ``` to change Chinese text files into PostScript files well. For more information in detail, take a look at `man cnprint` yourself.

Code Transformation

The `cnprint 2.80` has been added a great deal of *splendid abilities* such as transformations amongst various code formats, for example, BIG5 <=> GB <=> HZ. For BIG5 <=> GB, you need another tabulation for installing, though, which can be found from this following site:

> ftp://ftp.ifcss.org/pub/software/unix/convert/hc.tab

Put it under the fonts directory of HBF, and modify `cnprint.cmd`, adding this

```
DEFAULT_GBB5_TABLEFILE: /usr/local/lib/chinese/HBF/hc.tab
```

Not only, for BIG5 into GB codes, can the transformation of `cnprint 2.80` against **words to words** be done, but also the work against **phases to phases**. However, `cnprint` itself didn't offer the dictionary for transformations, that means that you have to create a dictionary yourself if you need one. Please refer to `man cnprint` for more details.

6.2 ps2cps

The purpose of this small program is to make PostScript files, which could not pork Chinese out to output devices, available for Chinese output. For example, when Netscape is printing files, it will transport files into PostScript formats first; however, the outputs of PostScript won't load Chinese fonts so that the original parts of Chinese words will become disturbed codes to output. This program can read PostScript in, and replace the disturbed codes with corresponding words; afterwards pork the results out to the standard output devices, which the output data can send to the printer that can print PostScript documents.

Pick ps2cps up from this site:

> ftp://linux.cis.nctu.edu.tw/packages/chinese/misc/ps2cps−0.1.tgz

Untar and unzip this file, and modify Makefile according to your demands:

```
BINPATH    : Installing pathname for binary ps2cps
PS2CPSPATH : Resources files' pathname for PS2CPS
PS2CPSRC   : Filename of resources files for PS2CPS
```

Next step is `make all install`.

You have to install HBF Chinese fonts first according to the previous section, and then modify your `ps2cpsrc` file:

```
HBF_PATH:      Define the directory pathname of HBF fonts
HBF_NAME:      Define filenames of HBF fonts(NOT including pathname)
CH_WORD_SHIFT: Define shift of Chinese fonts
```

The last item is used for adjustment of Chinese fonts' locations. Some Chinese fonts and the original English fonts may probably not locate on the same horizontal level line, so you can set this variable, of which numeric values ranging from −1.0 to +1.0, activated to adjust it up or down.

So, you can use that examples made from the founder to do some tests:

```
# ps2cps thhsieh.ps > c−thhsieh.ps
```

Use `ghostview` to see whether you can see Chinese words or not.

However, this program is still under beta, there are so many problems waitting for resolving. If you have any questions or recommendations, you can send messages to the author directly: Tung−Han Hsieh < thhsieh@twclx.phys.ntu.edu.tw>.

6.3 bg2ps

This is another program which can transform BIG5−based Chinese files into PostScript available for printing(the same as cnprint). But because it uses the TrueType fonts, the output is more beautiful than others. In addition, it has a script which can transform PostScript out of Netscape into Chinese. The author is Chen−Shan Chin < cschin@u.washington.edu>.

Get this software from this web site:

> http://weber.u.washington.edu/~cschin/bg2ps/

Installing bg2ps

Decompress and compile it:

```
# mkdir bg2ps
# cd bg2ps
# tar xzvf bg5ps.tgz
# gcc −O2 ttf2psm.c −o ttf2psm
```

Install TrueType fonts next. You can install it under the same directory of bg2ps or can assign another directory for use. Refer to Installing TTF fonts for more explanations. Then create a `.bg5ps.conf` under the directory, and you can pick directly up the sample file coming with this program to modify. The most important is to assign the directory where you installed the TrueType fonts to `chineseFontPath`, and rename the content of `fontName` to the fonts name you used.

Test the sample coming with it, and view the output as `ghostview` or `gv`.

```
# ./bg5ps −if test.big5 −of test.ps
# ghostview test.ps
```

Installing nps2cps

The nps2cps has no extra configuration files. You need to modify yourself `chineseFontPath` and `fontName` in `nps2cps` script.

Test nps2cps:

```
# nps2cps < netscape.ps > test.ps
# ghostview test.ps
```

6.4 gb2ps

The gb2ps program is another tool for printing GB and HZ codes.

How to get gb2ps?

Package:

`gb2ps.2.02.tar.gz` `ftp://ftp.ifcss.org/pub/software/unix/print`

Fonts:

`csong24.ccf` `ckai24.ccf` `cfang24.ccf` `chei24.ccf` `ftp://ftp.ifcss.org/pub/software/fonts/gb/misc/`

Put the fonts under certain self–established directory, just like `/usr/local/lib/chinese/CFONT`.

Installing gb2ps

Change the settings in `Makefile` before compiling gb2ps.

```
CFONT=/usr/local/lib/chinese/CFONT/
COVERPAGE=/usr/local/lib/chinese/lib/cover.ps
```

Then type these commands and hit return key,

```
# make
# cp gb2ps /usr/local/bin
```

7.Chinese Printing Softwares

7.1 LaTeX + CJK

TeX/LaTeX is a set of printing softwares, of which excellent and elegant output quality have been admiring and adopting out of the academic circles for several years. The CJK is a LaTeX2e macro package, which can let you use CJK (Chinese/Japanese /Korean) literal codes in TeX documents.

You need install TeX/LaTeX first on your Linux system; many Linux distributions have been included teTeX/LaTeX already. If haven't, you could install it by yourself. Please link to teTeX HOWTO for more information.

Getting this software

Obtain CJK 4.1.3 from this site:

> ftp://nctuccca.edu.tw/Chinese/ifcss/software/tex/CJK−4.1.3.src.tar.gz

Bring the demanded TTF fonts home:

> ftp://nctuccca.edu.tw/Chinese/ifcss/software/fonts/big5/ms−win/

Installation

You must have an clear ideal about the teTeX/LaTeX installing directory, `$TEXMF`, for example, `/usr/lib/texmf`. And I assume that you will use the `ntu_kai.ttf` font; if doesn't, make a change to match it.

- Put the downloaded fonts, after decompression, into the `$TEXMF/fonts/truetype/chinese`.
- Unzip and untar CJK−4.1.3.src.tar.gz, and mv the sub−directory `texinput` to `$TEXMF/tex/latex`, and rename it to `CJK`, and create the fonts directory.

```
# cd 4_1.3/; mv ./texinput $TEXMF/tex/latex/CJK
# mkdir −p $TEXMF/fonts/tfm/chinese/ntukai
# mkdir $TEXMF/ttf2pk
# mkdir $TEXMF/hbf2gf
```

- To come immediately, it will probably be the most difficult step. You need to invoke `patch` command to append `*.diff` under `4_1.3/doc/teTeX` upon these following files:

```
/usr/bin/MakeTeX*
$TEXMF/web2c/texmf.cnf
$TEXMF/fontname/special.map
```

For instance:

```
# cd /usr/bin
# patch -s < 4_1.3/doc/teTeX/MakeTeXPK.diff
```

According to the enormous TeX versions, your action with `patch` may fail perhaps. If so, you need to do it manually by yourself to patch these parts of failure(the portions of failure will record in `.rej`). If you don't understand the theory of `patch` well, you had better get someone experienced to help you.

- Compiling and installing `bg5conv`

```
# cd 4_1.3/utils/Bg5conv; gcc -o bg5conv bg5conv.c
# chmod 755 bg5latex
# cp bg5conv bg5latex /usr/local/bin/
# gzip bg5conv.1; cp bg5conv.1.gz /usr/local/man/man1/
```

Because there are some codes in BIG5 TeX documents may contain `{`, `}`, `&` and so forth, which are the specific tokens to TeX , the `bg5conv` can change this codes into certain format that can let TeX manipulate.

- Compile and install `ttf2pk`, which can change TrueType fonts into TeX's pk fonts.

```
# cd 4_1.3/utils/ttf2pk/src
# make all OS=unix
# cp ttf2pk /usr/local/bin/
# cd ..
# cp config/ttf2pk.cfg  $TEXMF/ttf2pk/
# gzip ttf2pk.1; cp ttf2pk.1.gz /usr/local/man/man1/
# cp c00kai.fd $TEXMF/tex/latex/CJK/Bg5/
# cp MakeTTFPK /usr/local/bin
```

- If you want to print documents vertically, you have to edit a `c00kair.fd` file under `$TEXMF/tex/latex/CJK/Bg5/`:

```
\def\fileversion{4.1.0}
\def\filedate{1996/11/20}
\ProvidesFile{c00kair.fd}[\filedate\space\fileversion]

% traditional Chinese characters in Big 5 encoding scheme.

% font shape: kai
% ntu_kai.ttf is Kai3 Shu1 (&quotmodel book")

\DeclareFontFamily{C00}{kair}{}

\DeclareFontShape{C00}{kair}{m}{n}{<-> CJK * ntukar}{}
\DeclareFontShape{C00}{kair}{bx}{n}{<-> CJKb * ntukar}{\CJKbold}

\endinput
```

- Execute `texconfig`:

```
# texconfig rehash
# texconfig hyphen
```

Tests

- Horizontal printing tests:

```
# cd 4_1.3/examples
# bg5latex Big5.tex          (See if there is a Big5.dvi appeared ?)
# xdvi Big5.dvi              (Can you see Chinese? Of course, in X mode)
# dvips Big5.dvi -o Big5.ps  (Change to PostScript format)
# ghostview Big5.ps          (View it as ghostview)
# lpr Big5.ps                (Send it to printers, see if there are Chinese printed.)
```

- Vertical printing tests: You can use the `Big5vert.tex` file under `examples` to repeat those previous procedures.

Adding New Fonts

For example, if you want to change to the Ming style font `ntu_mm.ttf`, then

- put your TrueType fonts under `$TEXMF/fonts/truetype/chinese`.
- And then add the two lines in `$TEXMF/ttf2pk/ttf2pk.cfg`:

```
ntumm:  -e Big5 $TEXMF/fonts/truetype/chinese/ntu_mm.ttf
ntummr: -r 1 -e Big5 $TEXMF/fonts/truetype/chinese/ntu_mm.ttf
```

- Create the `c00ming.fd` file:

```
# cd 4_1.3/utils/ttf2pk
# cp c00ming.fd $TEXMF/tex/latex/CJK/Bg5/
```

- Execute the `texconfig` again.
- Change kai to ming in file `4_1.3/examples/Big5.tex`, and then repeat this steps, `bg5latex`, `xdvi`, `dvips` and so on, to see if the results correct or not.
- If you want to print files vertically, redo this section's installation and create the `c00mingr.fd` file listed as follows, and then change kair to mingr in `Big5vert.tex` file, and repeat tests processes.

```
\def\fileversion{4.1.0}
\def\filedate{1996/11/20}
\ProvidesFile{c00kair.fd}[\filedate\space\fileversion]

\DeclareFontFamily{C00}{mingr}{}

\DeclareFontShape{C00}{mingr}{m}{n}{<-> CJK * ntummr}{}
\DeclareFontShape{C00}{mingr}{bx}{n}{<-> CJKb * ntummr}{\CJKbold}

\endinput
```

Creating CJK Documents

The dominant difference between Chinese CJK TeX documents and general LaTeX ones is that:

- There should exist the \usepackage{CJK} command in the preamble (\documentclass to \begin{document}¡^section, that means you must have CJK.sty loaded.
- Chinese words must be under the circumstances of CJK or CJK*.
- If you want to change fonts, you can use \CJKfamily command, for example, the command \CJKfamily{fs} will change the following fonts as Song−imitated fonts(Certainly, the `fs` fonts' name must be defined in `c00fs.fd`).

This is a demonstration for CJK document:

```
\documentclass[12pt]{article}
\usepackage{CJK}
\begin{document}
  \begin{CJK*}{Bg5}{kai}

    \section{first section}
    \section{second section}
    Paragraphs, sections, pictures, tables, references and so forth...
    ...

  \end{CJK*}
\end{document}
```

7.2 ChiTeX

Developed by professor Chen Hung−Yih < yih@math.ncu.edu.tw>. Operations with the ChiTeX are easy enough just like the English TeX, apart from some special instructions.

Obatining it

From here, you can find its vestige:

> ftp://dongpo.math.ncu.edu.tw/tex−archive/local/chitex/chitex/Linux/

Installing

You should know what's the version of TeX installed on your Linux.. On older system, the installed one usually is NTeX while on newer one, it will be always teTeX . How to tell which TeX you've installed, teTeX or NTeX, on your Linux System. Just run the TeX. If the monitor appears

```
This is TeX, Version 3.14159
```

, then it is teTeX. Otherwise,

```
This is TeX, Version 3.1415N
```

It is NTeX. Download the exact ChiTeX corresponding to your version of TeX.

It is simple to install ChiTeX. Just put `chitex60.tgz`(teTeX) or `chitexN.tgz`(NTeX) and `fonts1.tgz`, `fonts2.tgz` under `/usr/local`. And decompress `chitex60.tgz` to execute setup program `csetup`.

```
# tar zxvf chitex60.tgz
# cd chitex60
# ./csetup
```

If you are using Red Hat 5.0, you may install the rpm package I made:

ftp://ftp.phys.ntu.edu.tw/pub/os/linux/rpm/chitex−6.0.7−1.i386.rpm

Installing fonts

You can install Chinese TrueType fonts for ChiTeX.

- Put TrueType fonts under `$TEXMF/fonts/chinese/ttf`.
- Modify `$TEXMF/tex/chinese/chitex.fdf`, and add a new line:

  ```
  \choosechfont{fontname}{filename}
  ```

  In it, the `filename` is the fonts' names erased the `.ttf` part, and `\fontname` is the macro that you can use for this font in your document. For example, if you want to use a font named `avntmv.ttf`, put a line `\choosechfont{ming}{avntmv}`, and use the macro `\ming` to use the font `avntmv.ttf`.
- In `chitex.fdf`, there were several fonts defined; thus, if you want to install these fonts, you don't have to change `chitex.fdf` any more.

  ```
  \kai    ---->  ntukai.ttf
  \li     ---->  ntuli.ttf
  \mr     ---->  ntumr.ttf
  \fs     ---->  ntufs.ttf
  ```

Tests

Now, you can take the samples enclosed with ChiTeX to test:

```
# chilatex math2.tex        (Compiling)
# xdvi math2                (pre-viewing)
# dvips math2               (Changing to PostScript file)
# ghostview math2.ps        (Using ghostview to view the output)
```

You can also write a small document to test the new installed fonts:

```
\documentclass[12pt]{article}
\begin{document}
\ming
   This is a test(You should type these words in Chinese).
\end{document}
```

For more information, please refer to the homepage of professor Chen.

http://www.math.ncu.edu.tw/yih/intro.htm

7.3 Dtop

The Dtop is a Chinese printing software for the UNIX platform, developed by the Behavior Design Corporation. In early November, 1995, it released the version of v1.4, which was composite of five various platforms, simultaneously. The Linux beta version provided the users with a trial of free and endless expiration, which has created another nice Chinese environment for Linux fans. However, the formal version is late for publishing until now due to the tiny scope of business market. It seems that this had been ceased to develop.

How to Get it?

The beta version of Dtop for Linux can download from each school's ftp site:

- ftp://nctuccca.edu.tw/Chinese/ifcss/software/linux/X11R6/dtop1.4/pub/
- ftp://ftp.ntu.edu.tw/Chinese/ifcss/software/linux/X11R6/dtop1.4/pub/
- ftp://ftp.ccu.edu.tw/pub3/chinese/linux/X11R6/dtop1.4/pub/
- ftp://ftp.ncu.edu.tw/OS/linux/X/ifcss/X11R6/dtop1.4/pub/
- ftp://ftp.ifcss.org/pub/software/linux/X11R6/dtop1.4/pub/

There are three sub−directories saying respectively,

dtop.linux

Storage for binary files and data files of Dtop, which can divide into three major files. After decompressing all files, the disk space demanded is about 40MB.

dtop.readme

Storage for related documents of Dtop, which are stored as the file format defined by Dtop. Users can read this papers through this beta version directly.

dtop.manual

Storage of references for X version of Dtop, which are stored as the file format defined by Dtop. The X version can access through Linux, IBM AIX, HP−UX, Sun 4.1.x, and Solaris directly.

Installing

The hardware required is something like this: CPU 486 DX−33 or later, RAM 16MB or larger, 50MB disk space or so. If there is no enough memory on your system, you will get nuts someday.

Decompress all the files under `dtop.linux` to a self−selected directory, for example, `/usr/local/dtop`.

Before implementing it, you must first set environment variable `$DTOPHOME`, which is the directory that preparing to install Dtop. The `$DTOPTMP` is a temporary directory for Dtop, which is usually `/tmp`. The `XAPPLRESDIR` is the directory for resources files of Dtop, which is set at `$DTOPHOME/user` .

```
# export DTOPHOME=/usr/local/dtop
# export DTOPTMP=/tmp
# export XAPPLRESDIR=DTOPHOME/user
```

You need to set the Chinese fonts directory used by Dtop.

```
# xset fp+ $DTOPHOME/pcf.chn
```

Finally, you have to configure the Keysym matching table caused by the matching between Keysym and Keycode under X different from workstations. The Keysyms of `BackSpace` and `Delete`, for example, are all matching to the same Keycode under X, regarding the behavior of `BackSpace` as the `Delete`'s in reality . To solve this problem, the Dtop creates a Keysym file, locating under `$DTOPHOME/user` of which filename is `dtop_keysym.linux`. After starting X, invoke the command,

```
# xmodmap dtop_keysym.linux
```

Another solution is that invoke commands directly on shell:

```
# xmodmap −e "keycode 22 = BackSpace"
```

```
# xmodmap -e "keycode 107 = Delete"
```

When everything is ready, you can execute Dtop.

```
# $DTOPHOME/bin/dtop14
```

You may read all the on−line references enclosed in Dtop for more detailed introductions.

7.4 ChinesePower

The ChinesePower is a Far−East Editor running under X, which is easy and classified as WYSIWYG. It supports BIG5, GB, Japanese and Korean mixed inputs, and the printing and displaying PostScript format. It can generate GIF graphics of seven colors for documents, which is adequate for Chinese homepages. ChinesePower uses HBF or TTF fonts.

You can get it from,

ftp://ftp.ifcss.org/pub/software/x−win/editor/chpower−2.0.tar.gz

To compile Chinese Power, you will need HBF fonts and Motif libraries. At first, modify `Makefile` to fit your system, then

```
# make
```

After making step, it will generate binary executable files. Then export environment variables:

```
# export HBFPATH=/usr/local/lib/chinese/HBF/
# export TTFPATH=/usr/local/lib/chinese/TTF/
# export HZINPUTDIR=/usr/local/lib/chinese/dict/
# export CHPOWERPATH=path_of_chinesepower
```

7.5 EasyFlow

This is developed by wycc < wycc@iis.sinica.edu.tw> , which can make simple printing for Chinese documents. Relative information is locating at

http://formosa.iis.sinica.edu.tw/~wycc/

8.Useful Chinese Softwares

8.1 cjoe − Joe's Own Chinese Editor

JOE is a free and professional ASCII codes' editor operated on UNIX platform, which is just like other text editors on IBM PC. To use Chinese in JOE, you have to modify `.joerc` under your home directory. Refer to the homepage for details:

> http://www.neto.net/~bv1al/linux/cjoe.html

CJOE is a Chinese version of JOE. Get it from here below:

> ftp://ftp.ifcss.org/pub/software/unix/editor/cjoe−2.8.tgz

It is very simple to compile and install. Unless you want to change locations of binary or man page files, or just follows the steps below:

```
# make
# make install
```

8.2 celvis

Celvis is a vi/ex−like editor on UNIX, which is almost supporting all instructions that vi/ex has. You can edit articles including Chinese and English by using Celvis. Simultaneously, it also supports GB2312−80 and BIG5 codes.

You can get it from here below,

> ftp://ftp.ifcss.org/pub/software/unix/editor/celvis−1.3.tar.gz

Decompress it,

```
# tar zxvf celvis-1.3.tar.gz
# cd celvis
```

You need to change `tmp.c`, erasing 93−95 lines.

```
#if OS9
                  if we don't have write permission...
#endif
```

Then you can continue to compile it.

```
# cp Makefile.s5 Makefile
# make install
```

Because its `Makefile` is not for Linux particularly, you may see many warning message while compiling and linking; however, don't mention it, just keep it away. After it is done, the `celvis` will be installed under `/usr/local/bin`.

8.3 cvim

cvim is a Chinese patch program out of vim−4.2, including some features like vi but has no track in celvis−1.3, such as line number, circling lines and large files' editions. You can take `vim−4.2−Chinese−patch` and `vim−4.2.tar.gz:` from here,

ftp://ftp.csie.nctu.edu.tw/pub/Unix/Chinese/cvim

Untar and unzip following the steps below:

```
# tar −xvzf vim−4.2.tar.gz
# cd vim−4.2/src
# patch < ../../vim−4.2−Chinese−patch
```

Change `vim−4.2/src/feature.h` to fit your requires. It is simple to compile and install, that is,

```
# make
# make install
```

8.4 he

he was a famous editor on DOS, and is a diversion of Linux version. But this is a shareware program, limited with a hundred lines' edition.

Obtain it from here,

ftp://linux.cis.nctu.edu.tw/packages/he_linux/he_linux.tar.Z

Login as root,

```
# cd /
# decompress he_linux.tar.Z
# tar xvf he_linux.tar
```

Refer to `/usr/lib/he/notes2.2`, `/usr/lib/he/chap15` and `/usr/lib/he/appendix` for more simple illustrations.

8.5 hztty

Hztty can make transformations among various Chinese codes. Decompress `hztty−2.0.tar.gz` first.

```
# tar -xvzf hztty-2.0.tar.gz
# cd hztty-2.0
# make linux
```

After compilation, move the binary file `hztty` to the directory `bin`, and move man pages to the directory `man`.

```
# mv hztty /usr/local/bin
# chmod 555 /usr/local/bin/hztty
# cp hztty.1 /usr/local/man/man1
# chmod 444 /usr/local/man/man1/hztty.1
```

Please refer to the on−line manual of hztty to use it.

8.6 ktty

This is another tool, like hztty, using for reading Chinese on kterm or pxvt. Get it at this site:

> ftp://ftp.ifcss.org/pub/software/unix/convert/ktty1.3.tar.gz

However, it cannot be compiled on Linux, that you need use the ``tty.c'' in `hztty−2.0.tar.gz` and add the two lines to it.

```
linux:
      ${MAKE} ${MFLAGS} DEFINES='-DPOSIX -DSYSV -DUSE_SYSV_UTMP' ${PROG}
```

Then, you can make it work.

```
# make linux
```

8.7 Cemacs and CChelp For Emacs

Cemacs, using the GNU Emacs to show and edit Chinese files, has to run Emacs under Chinese virtual terminals while CCHELP is a system of providing Chinese assistant messages. After installed CCHELP, you can slip mouse to any Chinese word and click it without loosing, then there coming out with the messages about that word , including its pronunciation, English explanation and so forth. It supports both GB and BIG5 codes.

You can get them from this site:

> ftp://ftp.math.psu.edu/pub/simpson/chinese/

Install cemacs and cchelp in accordance with the README file.

8.8 Mule

The MULE is an abbreviation of MULtilingual Enhancement to GNU Emacs. In simplicity, it adds some materials to GNU Emacs to make it dealing with multi−languages(encoding systems). It encodes the encoding system of multi bytes again in its inner mechanism; hence, a piece of paper can simultaneously use Chinese(BIG5 and GB), Japanese, Korean, English, Thai, and so on.

Obtaining Mule−2.3 and patch for Linux

You can get `mule-2.3.tar.gz` and patch `mule-2.3+lx.diff.gz` for Linux:

> ftp://sunsite.unc.edu/pub/Linux/distributions/je/sources/mule/

If your system is Red Hat Linux, you can take `mule-2.3-1.i386.rpm`, `mule-common-2.3-1.i386.rpm` and `mule-elispsrc-2.3-1.i386.rpm`:

> ftp://sunsite.unc.edu/pub/Linux/distributions/redhat/contrib/contrib−2.0.x/RPMS/

Compiling and Installation

Decompress packed files and add the patch in.

```
# tar -xvzf mule-2.3.tar.gz
# patch < mule-2.3+lx.diff
# cd mule-2.3/
# ./configure "i386-*-linux" --with-x11 --with-x-toolkit --with-gcc
```

If you want to rectify the out−looking of mule to fit your taste, read `INSTALL` file, please. And run

``./configure --help''. Then, correct ``src/Makefile'', changing ``-lcurses'' to ``-lncurses''. Then,

```
# make
# make install
```

Default installing directory is /usr/local.

Using Chinese in Mule−2.3

If you have already installed fonts, you can use mule to enter and show Chinese. Most fonts are 16 or 24 points, so you can:

```
# mule -fn 8x16 &
```

or

```
# mule -fn 12x24 &
```

According to M−x load−library RETURN chinese RETURN.``Ctrl−]'' to shift inputs.

8.9 hc

This is a program of conversion for BIG5 and GB codes. Get it at this site:

ftp://ftp.ifcss.org/pub/software/unix/convert/hc−30.tar.gz

Decompress and install it:

```
# tar zxvf hc-30.tar.gz
# cd hc3
# make
# mv hc /usr/local/bin
# mv hc.tab /usr/local/lib/chinese
# mv hc.1 /usr/local/man/man1
```

For converting GB into BIG5 , using

```
hc -m g2b -t /usr/local/lib/chinese/hc.tab < INPUT_FILE > OUTPUT_FILE
```

For exchanging BIG5 into GB, using

```
hc -m b2g -t /usr/local/lib/chinese/hc.tab < INPUT_FILE > OUTPUT_FILE
```

You can write a shell script to simplify that instructions.

8.10 ctin

The ctin a news reader of all complete Chinese messages. Get it from here,

> ftp://linux.cis.nctu.edu.tw/packages/chinese/ctin/ctin−970625.src.bin.tgz

Set environment variables `$NNTPSERVER` first to export to the news server that you want to link before executing ctin.

```
# export NNTPSERVER=netnews.ntu.edu.tw
```

Then run `tin`.

8.11 Some Other Toys

You can find several small tools capable of showing Chinese, such as `cuptime`, `cw`, `cless`, `cwrite`, `cytalk`, and so forth.

> ftp://ftp.vit.edu.tw/unix/linux/chinese/

9.Related Chinese Problems with Others

9.1 Netscape Navigator

Netscape 2.0 or later support both BIG5 and GB codes, which have already discussed on several homepages. To display Chinese in Netscape, there are three steps:

1. Install Chinese fonts of X. Refer to the section Installing Chinese Fonts .
2. Run `netscape`, and configure `Document Encoding` as `Traditional Chinese (Big5)` or `Simplified Chinese`.

    ♦ In Netscape 2.x or 3.x, this will configure at `Options/Document Encoding/...`.

    ♦ In Netscape Communicator 4.x, configure it at `View/Encoding/...`.
3. Select the Chinese fonts you want.
    ♦ In Netscape 2.x, 3.x, configure it at `Options/General Preferences/Fonts`.
    ♦ In Netscape Communicator 4.x, configure it at `Edit/Preferences.../Appearance/Fonts`.

Maybe you will feel so strange that why you can only use `Fixed(HKU) Size 16.0`, which is causing from the settings in `/usr/X11R6/lib/X11/app-defaults/Netscape`. Assuming that you have the following BIG5 fonts:

```
# xlsfonts | grep big5
-hku-fixed-medium-r-normal--0-0-72-72-c-0-big5.hku-0
-hku-fixed-medium-r-normal--16-160-72-72-c-160-big5.hku-0
-kc-kai-medium-r-normal-fantizi-0-0-75-75-c-0-big5.eten.3.10-1
-kc-kai-medium-r-normal-fantizi-20-200-75-75-c-200-big5.eten.3.10-1
-kc-kai-medium-r-normal-fantizi-24-240-75-75-c-240-big5.eten.3.10-1
-kc-ming-medium-r-normal-fantizi-0-0-75-75-c-0-big5.eten.3.10-1
-kc-ming-medium-r-normal-fantizi-15-150-75-75-c-160-big5.eten.3.10-1
-kc-ming-medium-r-normal-fantizi-24-240-75-75-c-240-big5.eten.3.10-1
```

Add one line to `/usr/X11R6/lib/X11/app-defaults/Netscape`

```
*documentFonts.charset*big5.eten.3.10-1:              x-x-big5
```

Then, Netscape can use these fonts well.

Another solution is to name aliases for your fonts's names: Adding aliases in the `fonts.alias` file(create it yourself if there is no such a file) under your fonts directory.

```
-big5-taipeik-medium-r-normal--16-160-72-72-c-160-big5.hku-1 taipei16
-big5-taipeik-medium-r-normal--20-200-72-72-c-200-big5.hku-1 taipeik20
-big5-taipeik-medium-r-normal--24-240-72-72-c-240-big5.hku-1 taipeik24
```

The fonts filenames, like `taipeik20`, are that you need to give aliases to them. After modification, do

```
# xset fp rehash
```

to reload fonts's names to make them available.

You may find that the sizes of Chinese and English are out of proportion in homepages of Chinese−English languages(such as too small English words), which is the reason that what you've selected for English fonts and Chinese fonts is unbalanced at the magnitude. Go back to the configuration for fonts, and select Western(iso−8859−1). Then, in your opinion, change the size of English fonts to make it perfect in proportions.

9.2 sendmail

Because defaults of `sendmail 8.8.x` will encode all 8−bit mails first before sending them out, which may or may not reduce influences to those receiver. (Refer to Next Sub−Section for solutions). Most hosts can directly send 8−bit mails now, so you had better re−compile `sendmail` and close the encoding ability.

- Get the newest version from this site(or mirror site):

  ftp://ftp.sendmail.org/ucb/src/sendmail/
- Decompress it and modify `Makefile`:

```
# tar zxvf sendmail−8.8.8.tar.gz
# cd src/Makefiles
# chmod u+w Makefile.Linux
# vi Makefile.Linux
```

  Add `−DMIME8TO7=0` after `CFLAGS+=`.
- Compile and install `sendmail`:

```
# cd ..
# ./makesendmail all install
```

- Install man pages to the exact directory manually(It's ok if not installing).
- Erase the old `sendmail` process:

```
# kill −9 `head −1 /var/run/sendmail.pid`
```

- Restart `sendmail`:

```
# /usr/sbin/sendmail −bd −q1h
```

9.3 procmail

`procmail` is an electronic mail filter, which can manipulate mails first before storing them into your mailbox, for example, classification for mails and so on. Though, I want to teach you how to make use of `procmail` to uncode the encoded ones into pure text files and how to convert the various encoded mails into common encoding you used here.

Create `.procmailrc` file under your home directory, listed as follows:

```
# To avoid accidents, store mails before using procmail.
# You can filter mails to ensure which mail doesn't need to duplicate
# by, for example, MAILER−DAEMON.
:0 c
```

```
* !^From.*MAILER-DAEMON
mail/procmail-backup

# Uncode mails encoded by quoted-printable or base64.
:0
* ^Content-Type: *text/plain
{
    :0 fbw
    * ^Content-Transfer-Encoding: *quoted-printable
    | mimencode -u -q

        :0 Afhw
        | formail -I "Content-Transfer-Encoding: 8bit" \
                  -I "X-Mimed-Autoconverted: quoted-printable to 8bit by procmail"

    :0 fbw
    * ^Content-Transfer-Encoding: *base64
    | mimencode -u -b

        :0 Afhw
        | formail -I "Content-Transfer-Encoding: 8bit" \
                  -I "X-Mimed-Autoconverted: base64 to 8bit by procmail"
}

# Here will judge whether a mail is GB codes or not; if it is, convert it
# into BIG5 codes. If you want to convert BIG5 codes into GB codes, you
# need to exchange big5 with gb2312 and replace 'hc -m b2g' with 'hc -m g2b'.

:0
* ^Content-Type:.*text/plain;.*charset=gb2312
{
    :0 fw
    | hc -m b2g -t /usr/local/lib/chinese/hc.tab

        :0 Afhw
        | formail -I "Content-Type: text/plain; charset=big5" \
                  -I "X-Charset-Autoconverted: gb2312 to big5 by procmail"
}

# Store mails into mailbox.
:0:
${ORGMAIL}
```

In this case, integrating with `mimencode`, `formail` to decode mails, and use `hc` to convert GB codes mails into BIG5 codes mails. Thus, you have to install these tools in order to use procmail.

Eventually, rectify your `.forward` file.

```
"|IFS=' ' && exec /usr/bin/procmail -f- ~/.procmailrc ||exit 75 #login"
```

Notes: change the `login` as your login name.

9.4 telnet

If you can access Chinese on your own machine, but cannot access Chinese while telnet to other machines, then the problems may cause from `telnet` itself. When telnet is being under connection, you can press `Ctrl-]` to jump out temporarily, and enter **set binary** at the prompt of `telnet>` to assure the fully transmission of bits. You can also use `telnet -8` to make connections (but it seems won't work for some sites...?). Another more simple method is to use directly a 8–bit `telnet` program. Download the binary file from here:

> ftp://linux.cis.nctu.edu.tw/packages/chinese/misc/

9.5 less

`less` itself can display Chinese directly; just set the following environment variable can Chinese display:

```
# export LESSCHARSET=latin1
```

9.6 pine

Pine of version 3.95 later can support reading and entering Chinese mails. As you execute pine, select `SETUP/Config` in `feature list`, choose this(hit `X`):

```
[X]  enable-8bit-esmtp-negotiation
[X]  enable-8bit-nntp-posting
```

Then, hit `C` on `character-set`, and change its value to big5 or gb2312. Finally, hit `E` to escape and store this change.

You can also install the cpine capable of showing Chinese messages:

> ftp://ftp.vit.edu.tw/unix/linux/chinese/cpine–3.91.bin.tgz

9.7 samba

- At first, take the newest version of samba–1.9.17p5 and big5 patch home.

    > ftp://linux.cis.nctu.edu.tw/packages/network/samba/samba–1.9.17p5.tar.gz
    > ftp://linux.cis.nctu.edu.tw/packages/chinese/samba–big5–patch/samba–1.9.17p2–BIG5–patch–0.gz

* Decompress samba−1.9.17p5.tar.gz, and add the patch upon:

```
# tar zxvf samba-1.9.17p5.tar.gz
# cd samba-1.9.17p5/source
# zcat samba-1.9.17p2-BIG5-patch-0.gz | patch -s
```

* According to the normal procedures, you can compile and install it. Refer to the Samba HomePage.

9.8 lynx

Lynx v2.7 can view Chinese homepages directly. Execute lynx, and press `O)ption` / `C)haracter set`, and then choose `Taipei(Big5)` by arrow keys, and finally press '>' to store this set.

9.9 minicom

Use the switch `-l` to start `minicom`, then you can see Chinese in minicom.

9.10 fingerd

If you type Chinese in your `.plan` but can't be saw by others, this is probably caused by the inability of `fingerd` to send out 8−bit Chinese words. Get `cfingerd` from this site:

ftp://nctuccca.edu.tw/OS/Linux/packages/network/finger/cfingerd−1.3.2.tar.gz

Decompress it and execute `./Configure`, then implement `make all` .

Then, modify `/etc/inetd.conf`, changing the original `finger` to:

```
finger   stream   tcp     nowait   root    /usr/sbin/tcpd   /usr/sbin/in.cfingerd
```

Let `inetd` read the configuration file again:

```
# kill -HUP `cat /var/run/inetd.pid`
```

9.11 tintin++

The TinTin++ is not a Chinese software but just a useful tool when playing Chinese mud.You can download it from this place:

> ftp://ftp.princeton.edu/pub/tintin++

Here are some Chinese mud sites:

```
FengYun                  fengyun.com       5555
Xi You Ji                129.105.79.24     6905
Xia ke Xing              207.76.64.2       5555
```

10.Chinese Linux

If you have known some projects else about Chinese Linux, please tell me about it¡D

10.1 Chinese Linux Documentation's Projects

CLDP is now abandoned itself to translating Linux HOWTO documents, locating at http://www.linux.org.tw/CLDP/. CLDP has a mailing list ldp−trans@linux.org.tw. Its purposes are:

- Combine everyone's power to implement Linux HOWTO translations available.
- Discuss SGML Tools of dealing with Chinese.
- Share and maintain experience of translation for Linux HOWTO.
- To propagate the translation projects of Linux HOWTO.
- Others concerned with Chinese Linux.

If you want to join us, please send a mail contented(*not titled*) with `subscribe` to ldp−trans−request@linux.org.tw For more advanced explanations of this mailing list, please send a mail contented with `info` to the upper address. If you want to know the usage of mailing list, send a mail contented with `help` to the same address. If there is any suggestion or suspicion to the mailing list, please write to ldp−trans−approval@linux.org.tw¡D

If you are willing to contribute your own power, please join with this mailing list.

10.2 Chinese Linux Project

This is established for a Chinese environment of Linux, originated by cdchen. This is still under the period of setting, waiting for everyone's all efforts.

Homepage of this project is at http://chinese.linux.org.tw/ which is responsible for formal announcements; and it provides discussions of problems, suggestions and criticisms, delivering ourselves of achievements and so forth.

10.3 Chinese websites of Linux

Here are some websites for Chinese Linux information. If you have others not listed here, tell me about that, please.

BIG5

- http://www.linux.org.tw/
- http://chinese.linux.org.tw/
- http://linux.cis.nctu.edu.tw/
- http://linux.ntcic.edu.tw/
- http://freebsd.ee.ntu.edu.tw/bbs/6/index.html
- http://cc.shu.edu.tw/~rick/wwwguide/c_linux_hopenet.html
- http://henry.cis.nctu.edu.tw/~linuxwww/
- http://marr.dorm9.nccu.edu.tw/~marr/Comp/PC−Unix/index.html
- http://www.phys.ntu.edu.tw/~cwhuang/pub/os/linux/

GB

- http://csun01.ihep.ac.cn/
- http://www.clinux.ml.org/

10.4 Discussed groups of Linux

If you have any problem, you can post you question here, using Chinese is ok, too. However, make sure that this question is still unknown or hasn't answered in related documents or HOWTO, or *repeat some FAQs are absolutely not popular with these places.*

- news://tw.bbs.comp.linux
- telnet://henry.cis.nctu.edu.tw

11.FAQs

11.1 Why Can't I Enter Chinese?

Answer: This question is quite ambiguous, though. I cannot tell which condition that you have met? If you can not enter Chinese on console's shell, refer to the section Chinese Input Problems for detailed.

Or that you cannot enter Chinese in an editor, it is possible that your editor doesn't support Chinese. Please refer to the section Useful Chinese Softwares to install Chinese−supported editors.

If this is matched at the period of telnet, then refer to the section `telnet` for more explanations.

11.2 I have got the NTU TTF fonts, but how can I decompress it?

Answer: The NTU TFF fonts is compressed with arj format and divided it into several files for the convenience of putting it into floppy disks, causing that decompression is a little trifling. If you want `ntu_kai.ttf` font, for example, you must take `ntu_kai.arj`, `ntu_kai.a01`, `ntu_kai.a02`, and `ntu_kai.a03` home. Assuming that you have an arj tool of **DOS** version, put these four files altogether under the same directory and invoke this commands to decompress:

```
C:\> arj x -va -y ntu_kai
```

If you want to decompress them on Linux, you must use `unarj` to unarj them one by one, and then use `cat` to concatenate them together:

```
# unarj e ntu_kai.arj ; mv ntu_kai.ttf ntu_kai.ttf0
# unarj e ntu_kai.a01 ; mv ntu_kai.ttf ntu_kai.ttf1
# unarj e ntu_kai.a02 ; mv ntu_kai.ttf ntu_kai.ttf2
# unarj e ntu_kai.a03 ; mv ntu_kai.ttf ntu_kai.ttf3
# cat ntu_kai.ttf* > ntu_kai.ttf
```

11.3 Netscape's title and tag cannot see Chinese?

Answer: To install CXWin will solve this problem. Refer to CXWin for detailed.

11.4 My Netscape cannot see Chinese?

Answer: If you could not see any Chinese on all homepages, then you might probably not install Chinese fonts, or haven't make Netscape settled. Refer to the section Netscape.

But if you can see Chinese on most parts of Chinese homepages, only on some websites could see disturbed codes, then this may not be your private problems. A little websites take Frontpage to generate homepages, and their language encoding is `x−x−big5` not general `big5`.

This wil make all browsers except IE cannot identify this encoding, which just a bad trick adopted by Microsoft to fulfill its ambitions to occupy the market of browsers. To solve this problem, send a mail to the administrator of that site, telling them there are other browsers except IE all over the world. If they want to manage it perpetually, they should correct that unusual encoding to normal one.

Of course, if you have better solutions, please let me know of it.

11.5 How to enter Chinese in Netscape?

Answer: Install xcin+XA. Refer to this section XA.

11.6 What's the difference between ChiTeX and CJK? Can I install them at the same time?

Answer:

- The system of Chinese reading and searching of CJK which is independent and efficnet is based on the NFSS of LaTeX.
- CJK can use Chinese, Japanese, and Korean; and ChiTeX is just for BIG5.
- CJK can only use on LaTeX while ChiTeX can use on plain TeX and LaTeX .
- Instructions of ChiTeX are simple and useful.
- ChiTeX is approaching to real Chinese LaTeX.
- Difference in functionality...

ChiTeX and CJK should be compatible while installing them at the same system, but if the `ttf2pk` has the same name for both ChiTeX and CJK, then it could cause certain problems. A solution to this is that define the `$PATH` variable in each shell script, respectively, to point to the correct locations of `ttf2pk`. (*Thanks to professor Chen Hung−Yih.*.)

12.Appendix − Chinese Softwares of FTP.IFCSS.ORG

Warnning¡GMost pre−compiled Linux executable files are out−of−date and cannot use normally.

```
****
UNIX
****

========
UNIX:BBS
========

software: Phoenix BBS
version : 4.0, 1995.08.31
function: o UNIX platform multi-user BBS system,
          o discussion boards, private email
          o multichannel chat, one-to-one chat
          o Internet Email, News gateway,
          o 0Announce : Gopher-like information query interface.
          o fine tuned to allow more than 256 users on-line
          o configurable menu, screen display
          o Chinese message
URL     : ftp://ftp.ifcss.org/pub/software/unix/bbs/PhoenixBBS-4.0.tar.gz
author  : Ji-Tzay Yang, Ming-Feng Chen, Tzung-Yu Wen

============
UNIX:C-UTILS
============

software: addpy
version : 1.0
function: To annotate Pinyin to rare Hanzi and a portion of
          randomly selected common Hanzi.  Both GB (simplified) and
          Big5 (traditional) versions.  Based on statistics derived
          from huge Chinese corpus and well prepared hazni-freq-pinyin
          tables.  Source code and raw data provided.
URL     : ftp://ifcss.org/pub/software/unix/c-utils/addpy.tar.gz
filename: README.addpy, b5addpy.l, gbaddpy.l, b5addpy.dat,
          gbaddpy.dat, makefile
author  : Guo Jin

software: rm4mat
version : n/a
function: remove formating codes for printing in some GB files
URL     : ftp://ftp.ifcss.org/pub/software/unix/c-utils/rm4mat.c
author  : Chenghong Wang

software: mail_hxwz
version : 1.1
function: It extracts HXWZ from your mail (Suppose you are subscribing
          it).  It is a Bourne shell program which works on most Unix
          systems.  It can rerun itself every Friday automatically.
URL     : ftp://ftp.ifcss.org/pub/software/unix/c-utils/mail_hxwz
author  : Yaoen Zhang

software: auto_get_hxwz
Version : 1.2
Function: It gets the current issue of HXWZ in GB or postscipt format.
          It also process and print these files, and do the clean up.
          It save your time and server machine time.
URL     : ftp://ftp.ifcss.org/pub/software/unix/c-utils/auto_get_hxwz
```

```
author  : Yaoen Zhang

software: Chinese less
version : 290, 1995.5.25
function: Browse BIG5 and GB text files
URL     : ftp://ftp.ifcss.org/pub/software/unix/c-utils/cless-290.tar.gz
author  : Paul W. Shew
comment : requires a chinese terminal, like cxterm.

software: cscreen
version : 3.2b
function: This is a modified screen to minic ETen in cxterm.
          After you run cscreen in cxterm, it will intercept
          every key movement and examine if the current
          screen postion has a Chinese char. If it has,
          auto-key movements will be made accordingly.
URL     : ftp://ftp.ifcss.org/pub/software/unix/c-utils/cscreen-3.2b.tar.gz
author  : Shih-Kun Huang

software: ytalk
version : 3.0.2c6
function: ytalk-3.02c provides better compatibility for DEC's
          workstations, two-byte refresh for terminal like cxterm, and
          capable of passing character code 254, internally used as erase
          function in ytalk-3.0; Compatible with ytalk-3.0, cytalk-3.0,
          cytalk-3.0.2, ytalk-3.02c0/1/2/3/4/5, that is, you can still use
          Delete, or Backspace key.  If both ends use ytalk-3.02c4, the code
          254 is transparent, you can use more Chinese words to talk to
          others.
URL     : ftp://ftp.ifcss.org/pub/software/unix/c-utils/ytalk-3.0.2c6.tar.gz
author  : Sze-Yao Ni

software: lunar
version : 2.1
function: conversion program between Solar and Chinese lunar calendars;
          calculation of birthday in "4-column" astrology as well
URL     : ftp://ftp.ifcss.org/pub/software/unix/c-utils/lunar-2.1.tar.gz
author  : Ricky Yeung and Fung Fung Lee
comment : can output GB code, bitmap, or just ASCII

software: DateStar - Chinese Calendar Producer
version : 1.1
function: Displays Chinese and western calendar in
          ASCII code, BIG-5 code (Hongkong, Taiwan),
              GuoBiao code (PRC Standard), and HZ code (Network)
          Prints on two most popular laser printers
              PostScript laser printers, and
              HP LaserJet (PCL) printers
          Generates four different format
              Yearly calendar, Monthly calendar,
              One-page Weekly calendar, and Two-page Weekly calendar
          Shows calendar with 24 Solar Terms (JieQi),
              the Heavenly Stems and Earthly Branches
              (TianGan DiZhi Eight Characters)
          Supports user defined annotations
          Applicable from year 1841 through to 2060
URL     : ftp://ftp.ifcss.org/pub/software/unix/c-utils/datestar-1.1.tar.gz
author  : Youzhen Cheng
comment : UNIX version works on SUN Workstation with SUN OS 4.1.x
          see /software/dos/c-utils for DOS version

software: pull
```

```
version : 2.9, 1996.4.7
function: 1. Extracts the original file(s) from uuencoded/compressed/split
             file(s).
             a) uudecode a file and display the name of its decoded file
             b) decompress .zz (= .gz/.Z/.zip) file
             c) uudecode + decompress
             d) uudecode + cat (concatenate) + gunzip
          2. Packs file. Reverse the above `extracting' process.
             compresses, (splits), then encodes file(s)
URL     : ftp://ftp.ifcss.org/pub/software/unix/utils/pull.c.gz
author  : Yao Li

software: utf-utils
version : 15 Oct 1993.
function: some utility programs for manipulating Unicode/ISO-10646 text
          in the FSS-UTF encoding.
URL     : ftp://ftp.ifcss.org/pub/software/unix/c-utils/utf-utils.tar.gz
author  : Ross Paterson

software: gbfmt
version : 1.0
function: GB formatting with variable line width, GB<->HZ
URL     : ftp://ftp.ifcss.org/pub/software/unix/c-utils/gbformat.tar.gz
author  : Dongxiao Yue (http://www.cs.umn.edu/~dyue/wiihist/gbfmt.html)

===========
UNIX:EDITOR
===========

software: celvis
version : 1.3
function: vi editor with Chinese handling capabilities.
          Most run on some Chinese terminal, e.g. cxterm, or IBM-PC with
          some kind of Chinese DOS.  Work exactly like Unix vi editor,
          except that it side-scrolls long lines instead of wrapping.
URL     : ftp://ftp.ifcss.org/pub/software/unix/editor/celvis.tar.gz
          ftp://ftp.cs.purdue.edu/pub/ygz
author  : Man-Chi Pong, Yongguang Zhang
comment : comments, bug-reports, modifications to: c-elvis@cs.purdue.edu

software: Chinese JOE (Joe's Own Editor)
version : 2.8c
function: Chinese BIG5 localized text screen editor.  The key sequences are
          remeniscent of WordStar and TURBO-PASCAL. Makes full use of
          termcap/terminfo, is designed to work well over slow networks and
          low baud rate modems, and has the best features of vi. Most
          useful for editing unformatted text, such as USENET news articles
          and for editing block-structured languages such as C and PASCAL.
URL     : ftp://ftp.ifcss.org/pub/software/unix/editor/joe2.8_c.tar.gz
author  : <u8222034@cc.nctu.edu.tw>

============
UNIX:CONVERT
============


software: cn2jp
version : 1.3.2, 1996.4.11
function: code conversion routines for Chinese and Japanese
URL     : ftp://ftp.ifcss.org/pub/software/unix/convert/cn2jp1.3.2.tar.gz
author  : Seke Wei
```

```
software: ktty
version : 1.3, 1996.4.11
function: This is a kanji terminal translator among Chinese and Japanese.
          It allows online translation of codes so that you can view a
          specific code real time using your Chinese or Japanese terminal.
          It runs on Unix and is derived from the 'hztty' package
URL     : ftp://ftp.ifcss.org/pub/software/unix/convert/ktty1.3.tar.gz
author  : Seke Wei

software: code1
version : 1.3, 1996.4.11
function: This is a multilingual file browser for Chinese and Japanese.
          It runs on Unix and allows browsing of files in various codes
          using a Chinese or Japanese terminal.
URL     : ftp://ftp.ifcss.org/pub/software/unix/convert/code1.3.tar.gz
author  : Seke Wei

software: HUG program
version : 1.0, 1995.5.20
function: Converting between HZ, Uudecode/uuencode, GB codes
URL     : ftp://ftp.ifcss.org/pub/software/unix/convert/shug.osf.zip
          ftp://ftp.ifcss.org/pub/software/unix/convert/shug.sun4.zip
author  : Yinrong Huang

software: hztty
version : 2.0 Jan 29, 1994
Function: This program turns a tty session from one encoding to another.
          For example, running hztty on cxterm can allow you to read/write
          Chinese in HZ format, which was not supported by cxterm.
          If you have many applications in different encodings but your
          favor terminal program only supports one, hztty can make life easy.
          For example, hztty can your GB cxterm into a HZ terminal, a
          Unicode (16bit, or UTF8, or UTF7) terminal, or a Big5 terminal.
URL     : ftp://ftp.ifcss.org/pub/software/unix/convert/hztty-2.0.tar.gz
author  : Yongguang Zhang

software: EHZ
version : 2.0
function: Conversion among GB/BIG5/CNS and EHZ-BIG5/GB/CNS.
          Patch to hztty to support EHZ-BIG5/GB/CNS.
URL     : ftp://ftp.ifcss.org/pub/software/unix/convert/EHZ-2.0.tar.gz
author  : Ricky Yeung
comment : Also contains the EHZ spec and Fung Fung Lee's EHZ-BIG5-CNS spec.

software: b5cns
version : prototype
function: functions to convert Big5 <-> CNS
URL     : ftp://ftp.ifcss.org/pub/software/unix/convert/b5cns.tar.gz
author  : Ross Paterson

software: c2t
version : n/a
function: converts GB or BIG5 coded chinese to _pinyin_
URL     : ftp://ftp.ifcss.org/pub/software/unix/convert/c2t.tar.gz
authors : Tommi Kaikkonen and Katya Ta

software: BeTTY/CCF/B5Encode package
version : 1.534, 1995.03.22
function: a chinese code conversion package for codes widely used
          in Taiwan and the GB code widely used in Mainland, plus
          a 7-bit Big5 encoding method (B5Encode3/B5E3, an extension
          to HZ encoding for GB),
```

```
          including off-line converters (CCF/Chinese Code Filters and
          B5E/B5Encode) and an on-line converter (BeTTY) which simulates
          your native chinese terminal to become aware of the coding
          systems widely used in Taiwan and GB, HZ encoding.
URL     : ftp://ftp.ifcss.org/pub/software/unix/convert/BeTTY-1.534.tar.gz
          ftp://hermes.ee.nthu.edu.tw/shin/betty/BeTTY-1.534.tar.gz
author  : Jing-Shin Chang

software: BeTTY-ws_2fl.p1
version : 1.0 (patch to BeTTY-1.534) Oct. 1995.
function: 1. makes BeTTY respect the window(tty) size.
          2. a second Chinese code converting filter can be added on.
URL     : ftp://ftp.ifcss.org/pub/software/unix/convert/BeTTY-ws2fl.p1.tar.gz
author  : Wei Dong

software: c2gif
version : 0.01, 1995.10.21
function: convert a BIG5 text file to a GIF file
URL     : ftp://ftp.ifcss.org/pub/software/unix/convert/c2gif001.tar.gz
          http://www.math.ncu.edu.tw/~luors/c2gif/
author  : Luoh Ren-Shan

software: gb2jis
version : 1.5, 1995.11.19
function: convert GB (or HZ) to JIS with two-letter pinyin
URL     : ftp://ftp.ifcss.org/pub/software/unix/convert/gb2jis.tar.gz
          ftp://ftp.ifcss.org/pub/software/fonts/gb/bdf/guobiao16.bdf.gz
author  : Koichi Yasuoka

software: jis2gb
version : 1.5, 1996.1.10
function: convert JIS to GB (or HZ)
URL     : ftp://ftp.ifcss.org/pub/software/unix/convert/jis2gb.tar.gz
          ftp://ftp.ifcss.org/pub/software/fonts/gb/bdf/guobiao16.bdf.gz
author  : Koichi Yasuoka

software: HZ
version : 2.0
function: convert among GB, HZ and zW
URL     : ftp://ftp.ifcss.org/pub/software/unix/convert/HZ-2.0.tar.gz
author  : Fung F. Lee

software: HZ+ specification and conversion utilities
version : 0.77
function: HZ+ is a convenient 7-bit representation of mixed Big5, GB,
          and ASCII text for use in Internet e-mail, news, etc.
          Source code for Big5 <-> HZ+ and GB <-> HZ+ conversion
          utilities is here.  DOS executables can be found in
          another archive, /software/dos/convert/hzp.zip.  New in
          this Unix version is a simple HZ+ terminal program for cxterm
          which allows the user to transparently read HZ+ mail and news.
URL     : ftp://ftp.ifcss.org/pub/software/unix/convert/hzp.tar.gz
author  : Stephen G. Simpson

software: hc
version : 3.0
function: convert between GB and BIG5
URL     : ftp://ftp.ifcss.org/pub/software/unix/convert/hc-30.tar.gz
author  : Fung F. Lee and Ricky Yeung

software: Support Table for Hanzi Convert (hc)
version : 1994/05/01
```

```
function: Convert table supports the program Hanzi Convert
          (Author  : Fung F. Lee and Ricky Yeung) GB<->Big5.
          Include Russian, number, Japanese, graphing symbols and
          "incorrect" codes. Text file, comments in it.
URL     : ftp://ftp.ifcss.org/pub/software/unix/convert/sym-supp.tab
          ftp://ftp.ifcss.org/pub/software/unix/convert/in-corr.tab
author  : Chi-Ming Tsai

software: pbmbig5
version : 0.01, 1995.11.2
function: convert big5 coded Chinese text file to pbm graphic file
URL     : ftp://ftp.ifcss.org/pub/software/unix/convert/pbmbig5-0.01.tar.gz
          ftp://ftp.ifcss.org/pub/software/fonts/big/hbf/kck24.hbf
          ftp://ftp.ifcss.org/pub/software/fonts/big/hbf/kcchin24.f02
author  : Wei-Jou Chen

software: UTF utilities
version : 31 May 1994.
function: various utilities for the UTF encoding of Unicode/ISO-10646,
          including conversion from ISO-2022 and (partially) back again.
URL     : ftp://ftp.ifcss.org/pub/software/unix/convert/utf.tar.gz
author  : Ross Paterson

software: utf7
version : prototype, use at your own risk
function: functions to convert between UTF-7 and other codes
URL     : ftp://ftp.ifcss.org/pub/software/unix/convert/utf7.tar.gz
author  : Ross Paterson

software: ISO-2022-CN encoder and decoder
version : beta 960408
function: Convert between CN-GB and CN-CNS codes
URL     : ftp://ftp.ifcss.org/pub/software/unix/convert/iso-cn.tgz
author  : handa@etl.go.jp
comment : BIG5 code is not yet supported.

===============
UNIX:NETWORKING
===============

software: gopher2.014c
version : 2.0.14
function: A Chinese localized gopher client capable of 8-bit BIG5 Chinese
          string search on IBM AIX, SUN OS, and any other machines.
          Compatable with any BIG5 Chinese system such as ET and
          cxterm. executable binary for ibm and sun included.
URL     : ftp://ftp.ifcss.org/pub/software/unix/networking/gopher2.014c.tar.gz
          ftp://ftp.ifcss.org/pub/software/unix/networking/gopher.ibm.tar.gz
          ftp://ftp.ifcss.org/pub/software/unix/networking/gopher.sun.tar.gz
author  : Hoo-Tung Cheuk (NCTU CIS, Taiwan)

software: Chinese Tin
version : 1.2PL2a
function: tin 1.2PL2 newsreader with English/Big5 message toggle.
URL     : ftp://ftp.ifcss.org/pub/software/unix/networking/ctin122a.tar.gz
author  : Shih-Kun Huang

software: NcFTP with chinese message compatible
version : 2.3.0c, 1996.1.17
function: Chinese (BIG5) patch to NcFTP.
          Now it can display any chinese message from ftp server instead
          of "\xxx".  ANSI color compatible in Line Mode.
```

```
URL     : ftp://ftp.ifcss.org/pub/software/unix/networking/ncftp-2.3.0.chinese.tgz
author  : NCEMRSoft (orig), Aiken Sam (chinese patch)

==========
UNIX:PRINT
==========

software: C2PS
version : 1.30 Aug 1 1995
function: Translate Big5 coded Chinese document into Level 2 PostScript.
          This is the version for Sparcstation. Using Chinese TrueType fonts,
          you can create the most beautiful document with C2PS.
          This is a DEMO version. You can freely copied and use it.
URL     : ftp://ftp.ifcss.org/pub/software/unix/print/c2ps130sos.tar.gz
          ftp://ftp.ifcss.org/pub/software/fonts/big5/ms-win/
author  : Hsueh-I Lu

software: cnprint
version : 2.60  JAN-25-95
function: print GB/Hz/BIG5/JIS/KSC/UTF8 etc or convert to PostScript
          (conforms to EPSF-3.0). Fast.  Multicolumn. Vertical printing.
          Small disk space requirement. "Intelligent" treatment of
          punctuations.  Flexible change of fonts, char size,
          width/height, char and line spaces, paper orientation and
          margins, etc.  Support of European chars.  Special modes for
          printing HXWZ.  See readme for more
URL     : ftp://ftp.ifcss.org/pub/software/unix/print/cnprint260.tar.gz
          ftp://ftp.ifcss.org/pub/software/fonts/{gb,big5,misc,unicode}/hbf/
author  : Yidao Cai
comment : v2.60 is also for VMS, use v2.61 for DOS

software: GBscript
version : 1.11
function: Convert GB/ASCII mixed text to PostScript output.
          High print speed (4ppm on LaserWriter NTX).
          Support Adobe-2.1.
          Small PS file size (400K for one HXWZ issue).
URL     : ftp://ftp.ifcss.org/pub/software/unix/print/gbscript-1.11.tar.gz
author  : Yan Zhou

software: gb2ps
version : 2.02
function: convert GB/HZ to postscript, supports simple page formatting
          (change chinese fonts and font size, cover page, page
          number, etc). Five chinese fonts are provided in this
          release, they are Song, Kai, Fang Song, Hei and FanTi
          The HZ ENCODING is also supported.
URL     : ftp://ftp.ifcss.org/pub/software/unix/print/gb2ps.2.02.tar.gz
          ftp://ftp.ifcss.org/pub/software/fonts/gb/misc/fan24.ccf.gz
          ftp://ftp.ifcss.org/pub/software/fonts/gb/misc/fang24.ccf.gz
          ftp://ftp.ifcss.org/pub/software/fonts/gb/misc/hei24.ccf.gz
          ftp://ftp.ifcss.org/pub/software/fonts/gb/misc/kai24.ccf.gz
          ftp://ftp.ifcss.org/pub/software/fonts/gb/misc/song24.ccf.gz
author  : Wei SUN

software: news2ps
version : n/a
function: news2ps converts BIG5 to Postscript
URL     : ftp://ftp.ifcss.org/pub/software/unix/print/news2ps.c
          ftp://ftp.ifcss.org/pub/software/fonts/big5/misc/chinese.16.new
author  : The Society of HKU Postgraduate on Chinese Affairs
comment : rename chinese.16.new to chinese.16
```

```
software: hz2ps
version : 3.1
function: Convert hanzi (GB/BIG5) text to PostScript.
          Use HBF font files.
URL     : ftp://ftp.ifcss.org/pub/software/unix/print/hz2ps-3.1.tar.gz
          ftp://ftp.ifcss.org/pub/software/fonts/{gb,big5}/hbf/
author  : Fung F. Lee

===========
UNIX:VIEWER
===========

software: ChiRK
version : 1.2a
function: GB/HZ/BIG5 text viewer on terminals (or emulations) capable
          of displaying Tektronics 401x graphics, such as GraphOn,DEC
          VT240/330, Xterm, Tektool on Sun, EM4105 on PC,
          VersaTerm-Pro on Mac, etc.
          displays up to 17x40 Chinese characters per screen. works directly
          under UNIX mail and news programs. Comes with four fonts.
URL     : ftp://ftp.ifcss.org/pub/software/unix/viewer/ChiRK-1.2a.tar.gz
          ftp://ftp.ifcss.org/pub/software/fonts/gb/hbf/cclib.v
          ftp://ftp.ifcss.org/pub/software/fonts/gb/hbf/cclib.16
          ftp://ftp.ifcss.org/pub/software/fonts/gb/hbf/cclibf.16.gz
          ftp://ftp.ifcss.org/pub/software/fonts/big5/misc/chinese.16.new.gz
author  : Bo Yang
comment : rename chinese.16.new to chinese.16

software: Cbanner
version : 1.10, 950821
function: To show Chinese word's banner
URL     : ftp://ftp.ifcss.org/pub/software/unix/banner/cbanner1.10.tar.gz
author  : Sheen Cherng-Dar, rewritten by Jonen Liu
comment : requires ETen Big5 Chinese System's fonts.

software: gb2text
version : n/a
function: convert GB to text
URL     : ftp://ftp.ifcss.org/pub/software/unix/viewer/gb2text.c
author  : Ding Yijun

software: hzbanner
version : 1.1, Feb 15, 1995
function: Display Song style GuoBiao in large ASCII characters,
          supports GB2312-80 (^[$A), GB2312-80 + GB8565-88 (^[$(E),
          Chinese-EUC (8-bit Guobiao) CNS Plane 1 & 2, BIG5 and HZ-encoding
          ( ?·ã??)
URL     : ftp://ftp.ifcss.org/pub/software/unix/viewer/hzbanner11.tar.gz
          ftp://ftp.ifcss.org/pub/software/fonts/gb/bdf/guobiao16.bdf.gz
          ftp://ftp.ifcss.org/pub/software/fonts/cns/bdf/cns1hku16.bdf.gz
          ftp://ftp.ifcss.org/pub/software/fonts/cns/bdf/cns2hku16.bdf.gz
author  : Koichi Yasuoka

software: hzview
version : 3.1
function: Display hanzi (GB/BIG5) text on dumb terminal.
          Use HBF font files.
URL     : ftp://ftp.ifcss.org/pub/software/unix/viewer/hzview-3.1.tar.gz
          ftp://ftp.ifcss.org/pub/software/fonts/{gb,big5}/hbf/
author  : Fung F. Lee
```

```
Software: cnview
Version : 3.1 (UNIX version. DOS version available under /software/dos/viewer)
Function: View GB/Hz/Big5 encoded Chinese text file on * HP-UNIX (X-window) *
URL     : ftp://ftp.ifcss.org/pub/software/unix/viewer/cnview.tar.gz
          ftp://ftp.ifcss.org/pub/software/fonts/{big5,gb}/hbf/
Author  : Jifang Lin

software: readgb
version : n/a
function: convert GB to text
URL     : ftp://ftp.ifcss.org/pub/software/unix/viewer/readgb.c
author  : Yuzhao Lu
comment : modified from readnews.c

software: readnews
version : n/a
function: readnews converts BIG5 to ascii dot-matrix picture
URL     : ftp://ftp.ifcss.org/pub/software/unix/viewer/readnews.c
          ftp://ftp.ifcss.org/pub/software/fonts/big5/misc/chinese.16.new.gz
author  : The Society of HKU Postgraduate on Chinese Affairs
comment : rename chinese.16.new to chinese.16

==========
UNIX:INPUT
==========

software: CCTeach
version : 1.0
function: Chinese Character input method Teacher.
          Help new user to learn CC input and some utility programs
              of "cxterm NewFace" for associate dictionary tool,
              hotkey tool, WuBi phrase encoder, and converter with
              ".tit" <==> ".titnf".
          Based on GB and Big5 (ETen and HongKong).
          Support all input method by external dictionary file.
          Need cxterm in unix, CC DOS or ZW DOS in PC.
URL     : ftp://ftp.ifcss.org/pub/software/unix/input/CCTeach1.0.tar.gz
author  : Xiaokun Zhu

=========
UNIX:MISC
=========

software: ICCS 1.3
version : 1.3, June 26, 1994
function: Internet Chinese Chess Server
URL     : ifcss.org:/software/unix/misc/iccs-1.3.tar.gz
author  : Xi Chen
comment : file off-lined due to legal status July 3, 1996. Please contact
          the author Xi Chen at xichen@abel.math.harvard.edu for further info.

========
UNIX:WWW
========

software: cdelegate
version : 1.4a, 1996.5.1
function: This is a Chinese patch on DeleGate, a gateway for the WWW services.
          provides code translation between Chinese/Japanese for WWW browsers
URL     : ftp://ftp.ifcss.org/pub/software/unix/www/cdelegate1.4.tar.gz
author  : Seke Wei
```

```
software: Chinese Lynx
version : 2.5FMc, 1996.7.19
function: Chinese BIG5/GB patch to lynx, a WWW client for vt100 terminals.
          Volunteers needed to continue on the patch.
URL     : ftp://ftp.ifcss.org/pub/software/unix/www/clynx25.zip
author  : Nelson Chin

software: Internet MahJong Server (server + client applet)
version : 0.2beta
function: provides a server and a graphic client for playing MahJong on
          the Internet.
URL     : ftp://ftp.ifcss.org/pub/software/unix/www/MJ_dist.tar.gz
author  : Zuwei Thomas Feng
*****
LINUX
*****

software: D Series (Chinese Tools, ELF binary)
version : 1.00,  March 25, 1995
function: Binary distribution of various useful Chinese tools:
          Viewers -- cxterm, crxvt; Input server -- xcin; GB,Big5,HZ,B5E3
          code converters -- ccf, hc, hz2gb, gb2hz, zw2hz, b5decode,
          b5encode; Print tool -- lunar, ttf2ps; Pseudo tty -- hztty,
          betty; Various handy scripts, man pages, dictionaries, HBF fonts,
          xfonts included; chdrv, celvis, elm, sendmail
URL     : ftp://ftp.ifcss.org/pub/software/linux/CLinux/CTool/d1
          ftp://ftp.ifcss.org/pub/software/linux/CLinux/CTool/d2
          ftp://ftp.ifcss.org/pub/software/linux/CLinux/CTool/d3
          ftp://ftp.ifcss.org/pub/software/linux/CLinux/CTool/d4
author  : Eric Lin
comment : requires XFree86 3.1+, ELF libraries

software: C Series (Chinese packages for Slackware)
version : N/A
function: The Chinese packages collected by Wei-Jou Chen can be installed by
          Slackware's setup tools. Basic idea are that we have right to install
          and remove Chinese softwares easily and beginners can play them
          without much trouble.
URL     : ftp://ftp.ifcss.org/pub/software/linux/CLinux/c1/
          ftp://ftp.ifcss.org/pub/software/linux/CLinux/c2/
          ftp://ftp.ifcss.org/pub/software/linux/CLinux/c3/
          ftp://ftp.ifcss.org/pub/software/linux/CLinux/c4/
          ftp://ftp.ifcss.org/pub/software/linux/CLinux/c5/
compiler: CHEN, Wei-Jou

software: MU Series (Mule packages for Slackware)
version : N/A
function: The Multilingual Emacs 2.0 packages for XFree86 2.X and 3.1
          collected by Shawn Hsiao can be installed by Slackware's setup
          tools
URL     : ftp://ftp.ifcss.org/pub/software/linux/CLinux/mu1/
          ftp://ftp.ifcss.org/pub/software/linux/CLinux/mu2/
          ftp://ftp.ifcss.org/pub/software/linux/CLinux/mu3/
          ftp://ftp.ifcss.org/pub/software/linux/CLinux/mu4/
          ftp://ftp.ifcss.org/pub/software/linux/CLinux/mu5/
          ftp://ftp.ifcss.org/pub/software/linux/CLinux/mu6/
compiler: Shawn Hsiao

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LINUX:C-UTILS
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software: GNU fileutils-3.9
version : 3.9, 1 August 1994
function: Chinese version of the GNU file utility programs for Linux.
URL     : ftp://ftp.ifcss.org/pub/software/linux/c-utils/fileutils-3.9-bin-chinese.tar.gz
author  : Patrick D'Cruze

software: C2PS
version : 1.30 Aug 1 1995
function: Translate Big5 coded Chinese document into Level 2 PostScript.
          This is the version for Linux. Using Chinese TrueType fonts, you
          can create the most beautiful Chinese documents with C2PS.
          This is a DEMO version. You can freely copied and use it.
URL     : ftp://ftp.ifcss.org/pub/software/linux/chinese_utils/c2ps130lnx.tar.gz
          ftp://ftp.ifcss.org/pub/software/fonts/big5/ms-win/
author  : Hsueh-I Lu

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LINUX:EDITOR
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software: ?????? for Linux (promotion version)
version : v2.163
function: PE2-like text editor, special designed for Chinese
URL     : ftp://ftp.ifcss.org/pub/software/
agent   : LU, Heman

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LINUX:TTY
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software: chdrv
version : 1.0.7, 1995.12.20
function: Chinese Terminal Simulator. Does not require X-Windows.
URL     : ftp://ftp.ifcss.org/pub/software/linux/tty/chdrv-1.0.7.tar.gz
          ftp://ftp.ifcss.org/pub/software/linux/tty/chdrvbin-1.0.7.tar.gz
          ftp://ftp.ifcss.org/pub/software/linux/tty/chdrvfont.tar.gz
author  : WANG, Yu-Chung

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LINUX:X11R6
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software: Behavior DTop (for Linux)
version : 1.4, Beta
function: A full-featured Chinese DeskTop Publishing Software Package
          characterized by object-oriented design for manipulating
          various document objects, including text, tables, graphics,
          equations, images, in an integrated way. Two outline fonts
          are provided in the Beta Version. PostScript output.
          Good as an English DeskTop Publishing Software Package too.
          (See the README's & formated DTop manual files for a long and
          complete list of functions and characteristics).
URL     : ftp://ftp.ifcss.org/pub/software/linux/X11R6/dtop1.4/
author  : DTop Development Group
```