Womp Howto

William Daniau

1st January 2004

1 Introduction

I've tried to make Womp as self-exponent as possible, nevertheless a user documentation will be written ... one day.

Hereafter you'll find some explanations for the installation. By the way at the moment I write this document, a new version of Wopi the Womp installer is underway. In the meantime you'll have to do it by hand. :-)

2 Oh you sucks! I just want to try it quickly to see if it's worth!

Ok Ok, keep calm!

Download an iso, burn it, and boot your computer on the CD.

Just verify that you have sufficient Ram for the iso you download :

- womp-version-allcodecs-extrafonts-network-ppp-firebird.iso : 256MB RAM
- womp-version-allcodecs-extrafonts-network-ppp-w3m.iso : 128MB RAM
- womp-version-allcodecs-extrafonts-nonetwork.iso : 128MB RAM
- womp-version-minimal.iso : 64MB RAM

Then if you liked it, come back to this document and read the rest of it. If you did not liked it email me and tell me why, I love feedbacks!

3 Womp structure

> IMPORTANT NOTE : Windows users must be aware of the following : as unix systems are case sensitive, it is important if you put the installation files under a windows partition to respect case! For example directory "womp" under c: must be "womp" and not "Womp" or "WOMP" or "WoMp", same rule for all womp files.

First of all there are two different ways of running Womp :

- "Memory installation" : Womp will run entirely from memory
- "Loopback installation" : Womp will use a read-only loopback file located on a local harddisk partition.

The main interest of the Loopback installation is that it uses very low memory, which means you'll be able to run the full featured Womp with only 64MB RAM (probably less, but I did not try). There is no real interest of using the loopback installation if the machine has 256MB or more RAM.

Also Womp is divided in two parts :

- The "bootcode"
- The Womp installation files (either Memory or Loop)

3.1 The Bootcode

The bootcode is a classical linux starting system composed of the kernel and an initial ramdisk. This bootcode can be launched by several methods including floppy disk, bootable CD, lilo, grub.

What will the bootcode do after loading the kernel?

1. It will first try to find the memory installation file on local CDs, then start Womp in memory
2. If it did not found memory installation on local CDs, it will look for a loopback or memory install on local drives, then start Womp either using the loopback or in memory depending of what it has found (if both files are present it will start the loopback).
3. If it fails to find any installation files, it will inform you an give you the only choice of rebooting!

3.2 The memory installation files

Regardless of the support (CD, Harddrive, USB key etc), the memory installation will use the following files, which are to be located on a directory called "womp" on the root of the CD or local partition or USB key.

3.2.1 Basic

- wompmem.bz2 : Required. This is the base memory installation file
- packs/mplayer_pack.tar.bz2 : Required. This package MUST be present as it contains MPlayer
- packs/qt_pack.tar.bz2 : QT codecs
- packs/real_pack.tar.bz2 : Real codecs
- packs/xanim_pack.tar.bz2 : xanim codecs
- packs/network_pack.tar.bz2 : network support.

  If network support is present the following may be added also :

  - packs/ppp_pack.tar.bz2 : ppp support
  - packs/w3m_pack.tar.bz2 : w3m text web browser
  - packs/MozillaFirebird_pack.tar.bz2 : Mozilla Firebird browser (this package requires also packs/firebird_sup_pack.tar.bz2)

  Usually you may add either Firebird or w3m, not the two.

3.2.2 Customization directories

- packs/backgrounds :

  Put files named desktop1.jpg, desktop2.jpg, desktop3.jpg and desktop4.jpg in this directory to have them used as backgrounds in the 4 desktops available in Womp.

- packs/fonts :

  This directory contains fixed size mplayer fonts in a .tar.bz2 format

- packs/fonts/ttf :

  Put any ttf font compressed by gzip into this directory to have it available in Womp (a win32 gzip exe is provided for windows users)

- packs/extras :

  This directory contains extra packages, any .tar.bz2 file in this directory will be unpacked in Womp's root.

3.3 The loopback installation files

Loopback installation will use the following files located in womp directory :

- womp.img : Required. This is the loopback file.
- directory packs/backgrounds will be used as in memory installation
- directory packs/fonts will be used as in memory installation

Unfortunately, loopback installation will NOT WORK on NTFS partitions (which is now the standard for WinXP)

3.4 Note about TrueType fonts

Although truetype fonts are supported, the only one that is included in Womp distribution is a font from XFree86 distribution that is not complete (it does not have all the encodings). Most of TrueType fonts such as arial or times are commercial products that cannot be included here. When running, Womp will allow you to add a truetype font by browsing your floppy or local partitions. You can also add one in the installation by putting a gzip'ed ttf file into directory womp/packs/fonts/ttf. There's a script called getarial.bat that will help windows users to add arial.ttf.gz to the packs/fonts/ttf directory.

4 Launching the boot code

4.1 Boot parameters

Whatever method is used to launch the bootcode, you'll have the opportunity to add several boot parameters, some are required, some are optional :

```
Required parameters :
   + video options
   video=vesa:ywrap,mtrr
   This will enable video memory wrapping and use of mtrr
   ( see linux/Documentation/fb/vesafb.txt )

   + screen resolution :
   800x600 16bits  :  vga=788
   800x600 32bits  :  vga=789
   1024x768 16bits :  vga=791
   1024x768 32bits :  vga=792

Optional parameters :
   + keeping modules in memory installation
   keepmods=y
   Normally in the memory installation, modules are removed
   from memory to free some space.
```

```
If this is specified, modules will remains in memory.
This has no effect in the loopback installation.

+ Do not use pcmcia
pcmcia=n
Womp will not try to use pcmcia cards.

+ Do not ask for user settings
go=y
During startup, users will be prompted for
keyboard, language, sound system and mouse type.
If this is specified, users will not be asked, it is then
a good idea to also specify these parameters if the default
is not the correct value :
    + kb=fr/de (default us)
    + lang=fr/cz (default en)
    + oss=y (use oss instead of alsa)
    + mouse=ps2/usb/serial (default ps2)
```

4.2 Linux users

Linux users may launch the bootcode with any bootloader, both lilo and grub has been successfully tested. Just boot Womp kernel with init.gz as the ramdisk. For the root device, you may choose anything like root=/dev/shm or root=tmpfs or root=/dev/none it doesn't matter.

But you must specify the required boot parameters as described before :

Here's a typical lilo entry :

```
image = /boot/vmlinuz.womp
    label = womp
    root = /dev/shm
    vga = 789
    initrd = /boot/init.gz
    append = " video=vesa:ywrap,mtrr go=y oss=y mouse=usb kb=fr lang=fr"
```

4.3 Old Windows with dos mode

Users of old windows with a dos mode such as win98 can use loadlin to launch the bootcode. Copy the following files :

```
vmlinuz.womp to c:\womp\vmlinuz
loadlin.exe  to c:\womp\loadlin.exe
womp.bat     to c:\womp\womp.bat
init.gz      to c:\womp\init.gz
```

Then just launch womp.bat.

In some rare cases launching with loadlin will lead to bad hardware detection, so just try and see. The boot parameters as described just before can be specified in the file womp.bat.

4.4 All systems

4.4.1 Boot from a floppy

You can boot with the provided floppy disc, windows users will use rawwritewin.exe to build the bootdisk. Linux users will use dd if=bootdisk.img of=/dev/fd0.

Boot parameters can be specified in the file syslinux.cfg on the floppy.

4.4.2 Boot from Zip (ide/USB), USB Key

This will work provided your bios is able to boot the media. Usually there's no problems for IDE Zip, but only recent bioses will boot on USB devices.

```
Under linux :
  let's assume you USB Key for example appears as /dev/sda1 :
  syslinux /dev/sda1

Under Windows :
  let's assume your USB key appears at E:
  syslinux E:

That's it! This will have created a file called
ldlinux.sys on the key, do not erase it.
Then copy files :
    vmlinuz.womp as linux
    init.womp.gz as init.gz
    syslinux.cfg
```

4.4.3 Boot from CD

Follow the instructions of section 5.

5 Building a Womp CD

The goal : making an iso image with a bootable Womp and media content in the remaining space.

Here's the procedure :

1. According to previous information on Womp structure you'll have to create a womp directory into src directory, do not modify the isolinux directory, except isolinux.cfg where you can add your boot parameters.
2. Add your media content (*.mp3, *.avi etc etc) into src.
3. Build the iso with makeit.sh under Linux or makeit.bat under Windows.
4. Burn the iso on a CD with your preferred burning software.

   IMPORTANT NOTE : Any memory installation (as a Womp CD) using MozillaFirebird will need at least 256MB RAM.

5.1 Using the predefined scripts

There are some predefined scripts that can be used to build standard womp tree for iso creation. They can also be used to create the womp tree that can be copied on an harddisk partition. After running these scripts, run makeit.sh (linux) or makeit.bat (windows) to build the iso, then burn it on a CD.

5.1.1 makefull.sh makefull.bat

makefull.sh under Linux and makefull.bat under Windows will create the womp directory into src for a full-featured Womp with MozillaFirebird.

5.1.2 nonetwork.sh nonetwork.bat

nonetwork.sh under Linux and nonetwork.bat under Windows will create the womp directory into src for Womp with all codecs and fonts but without network support.

5.2 Bootcode only CD

To build a bootcode only CD, that is a CD that can be booted to load an installation on a local partition or an USB key, simply delete directory womp into src, add your media content (the bootcode is very small less than 2MB), run makeit.sh (or makeit.bat under windows) and burn the iso.

6 Examples of memory installation

6.1 Example 1 : files on win98 c:, launch with loadlin

Womp with all codecs, arial truetype font and a backround image:

```
Content of C:\womp directory
  C:\womp\linux
  C:\womp\init.gz
  C:\womp\loadlin.exe
  C:\womp\womp.bat
  C:\womp\wompmem.bz2
  C:\womp\packs\mplayer_pack.tar.bz2
  C:\womp\packs\qt_pack.tar.bz2
  C:\womp\packs\real_pack.tar.bz2
  C:\womp\packs\xanim_pack.tar.bz2
  C:\womp\packs\backgrounds\desktop1.jpg
  C:\womp\packs\fonts\ttf\arial.ttf.gz
```

Launch womp.bat in dos mode to start Womp.

6.2 Example 2 : files on win d:, launch with bootdisk or Womp CD

Womp with all codecs, arial truetype font, backround image, network support and firebird. The womp directory can reside on any disk, not necessarily c:, the only requirement is that it must be on root's disk not in a subdirectory.

```
Content of D:\womp directory
  D:\womp\wompmem.bz2
  D:\womp\packs\mplayer_pack.tar.bz2
  D:\womp\packs\qt_pack.tar.bz2
  D:\womp\packs\real_pack.tar.bz2
  D:\womp\packs\xanim_pack.tar.bz2
  D:\womp\packs\network_pack.tar.bz2
  D:\womp\packs\MozillaFirebird_pack.tar.bz2
  D:\womp\packs\firebird_sup_pack.tar.bz2
  D:\womp\packs\backgrounds\desktop1.jpg
  D:\womp\packs\fonts\ttf\arial.ttf.gz
```

Launch Womp using either the Womp bootdisk or a bootcode only Womp CD (as described in section 5).

6.3 Example 3 : files on linux partition, launch with lilo

Womp with all codecs, arial truetype font, background image, network support w3m browser.

The womp directory may be on the root of any partition, so putting it directly under / is ok :

```
Content of /womp :
  /womp/wompmem.bz2
  /womp/packs/mplayer_pack.tar.bz2
  /womp/packs/qt_pack.tar.bz2
  /womp/packs/real_pack.tar.bz2
  /womp/packs/xanim_pack.tar.bz2
  /womp/packs/network_pack.tar.bz2
  /womp/packs/w3m_pack.tar.bz2
  /womp/packs/backgrounds/desktop1.jpg
  /womp/packs/fonts/ttf/arial.ttf.gz
```

Now put vmlinuz.womp and init.gz into /boot, edit lilo.conf, add the following entry, and run lilo :

```
image = /boot/vmlinuz.womp
    label = womp
    root = /dev/shm
    vga = 788
    initrd = /boot/init.gz
    append = " video=vesa:ywrap,mtrr go=y oss=y mouse=usb kb=fr lang=fr"
```

In this example, user will not be prompted for choices, here we have selected an usb mouse, a french keyboard and french language.

6.4 Example 4 : files on USB key, launch from bootdisk or Womp CD

Just copy one of the previous womp directory example on the USB key, plug it then boot with the bootdisk or a Womp bootcode only CD or even with lilo.

7 Examples of loopback installation

7.1 Example 1 : files on win98 c:, launch with loadlin

```
Content of C:\womp directory
  C:\womp\linux
  C:\womp\init.gz
  C:\womp\loadlin.exe
  C:\womp\womp.bat
  C:\womp\womp.img
  C:\womp\packs\backgrounds\desktop1.jpg
  C:\womp\packs\fonts\ttf\arial.ttf.gz
```

Launch womp.bat in dos mode to start Womp.

7.2 Example 2 : files on win D:, launch with bootdisk or Womp CD

```
Content of D:\womp directory
  D:\womp\womp.img
  D:\womp\packs\backgrounds\desktop1.jpg
  D:\womp\packs\fonts\ttf\arial.ttf.gz
```

Launch Womp using either the Womp bootdisk or a bootcode only Womp CD (as described in section 5).

7.3 Example 3 : files on linux partition, launch with lilo

The womp directory may be on the root of any partition, so putting it directly under / is ok :

```
Content of /womp :
  /womp/womp.img
  /womp/packs/backgrounds/desktop1.jpg
  /womp/packs/fonts/ttf/arial.ttf.gz
```

Now put vmlinuz.womp and init.gz into /boot, edit lilo.conf, add the following entry, and run lilo :

```
image = /boot/vmlinuz.womp
    label = womp
    root = /dev/shm
    vga = 788
    initrd = /boot/init.gz
    append = " video=vesa:ywrap,mtrr go=y oss=y mouse=usb kb=fr lang=fr"
```

In this example, user will not be prompted for choices, here we have selected an usb mouse, a french keyboard and french language.

7.4 Example 4 : files on USB key, launch from bootdisk or Womp CD

Just copy one of the previous womp directory example on the USB key, plug it then boot with the bootdisk or a Womp bootcode only CD or even with lilo.