GRUB2 transition

GRUB 0.97 is dead. Viva GRUB2

GRUB2 history

- 1995: Start of GRUB Legacy
- 1999: GRUB Legacy becomes GNU project
- 2002: PUPA (Yoshinori K Okuji)
- 2004: GRUB2
- 2004: PowerPC port.
- 2005: Sparc64 port.
- 2006: EFI port.

GRUB2 history (continued)

- 2007: LinuxBIOS (now Coreboot) port
- 2008: OLPC port.
- 2009: Yeeloong second-stage bootloader
- 2009: QEMU port.
- 2010: Yeeloong firmware bootloader
- 2011?: Fuloong and IA64 ports, Beagleboard (ARM) ?

Design principles

- Memory heap.
- grub_POSIX-like.
- Modularisation.
- Portablity.
- Supporting both firmware and direct hardware access functions.
- GRand and Unified.
- Configurability.
- Bash-like scripting support.

Design principles

- Autogenerated config in most cases.
- Unicode support.
- Single-threaded.
- User interaction.

Advantages

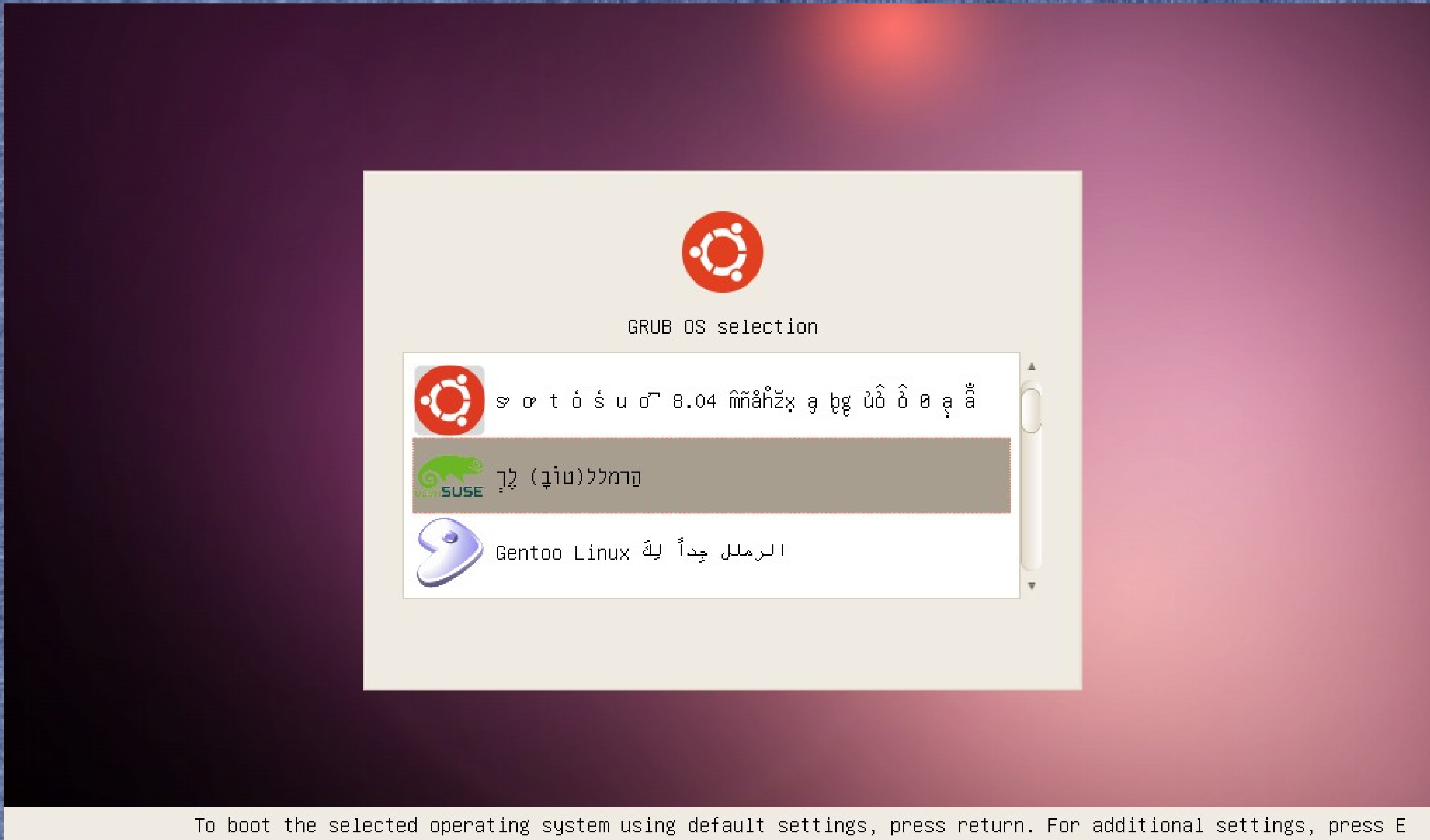
- Maintained.
- Multiplatform.
- Translated / translatable (consult translationproject.org)
- RTL-capable rendering.
- Multiterminal (e.g. serial and local)
- GPT support even on BIOS. Adios 2TiB limit.
- Scriptable

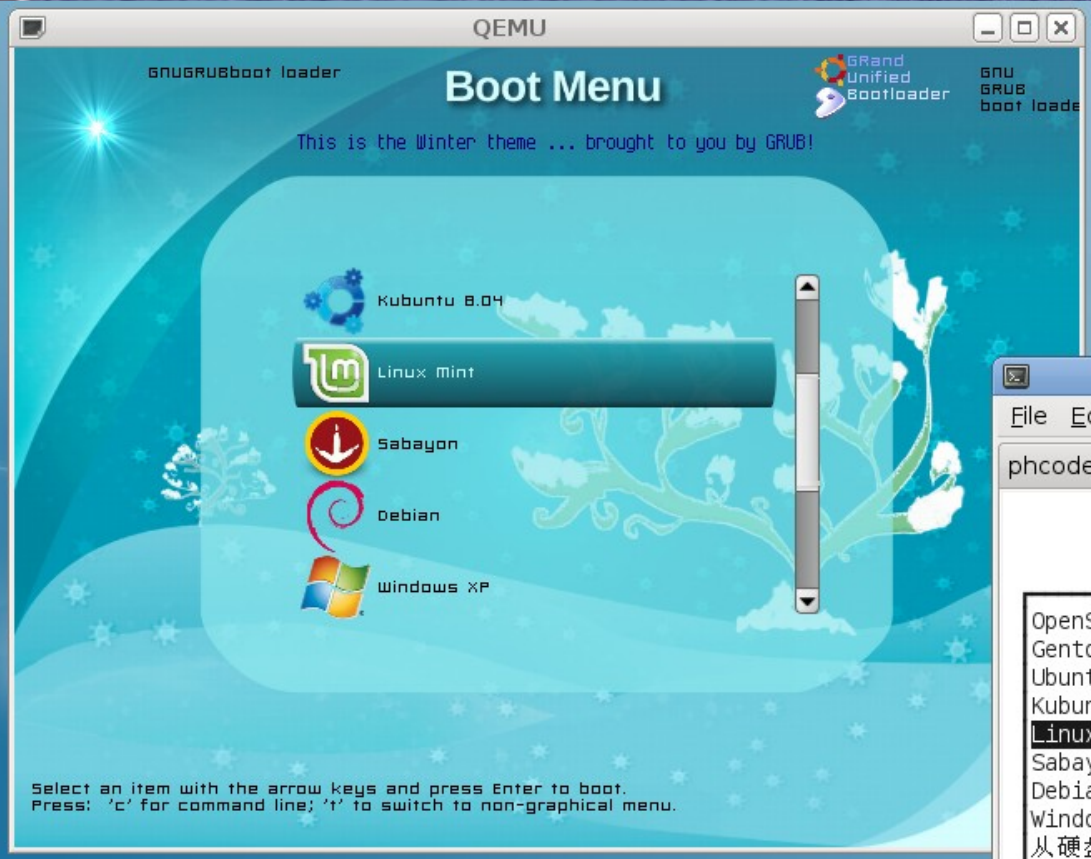
Advantages (continued)

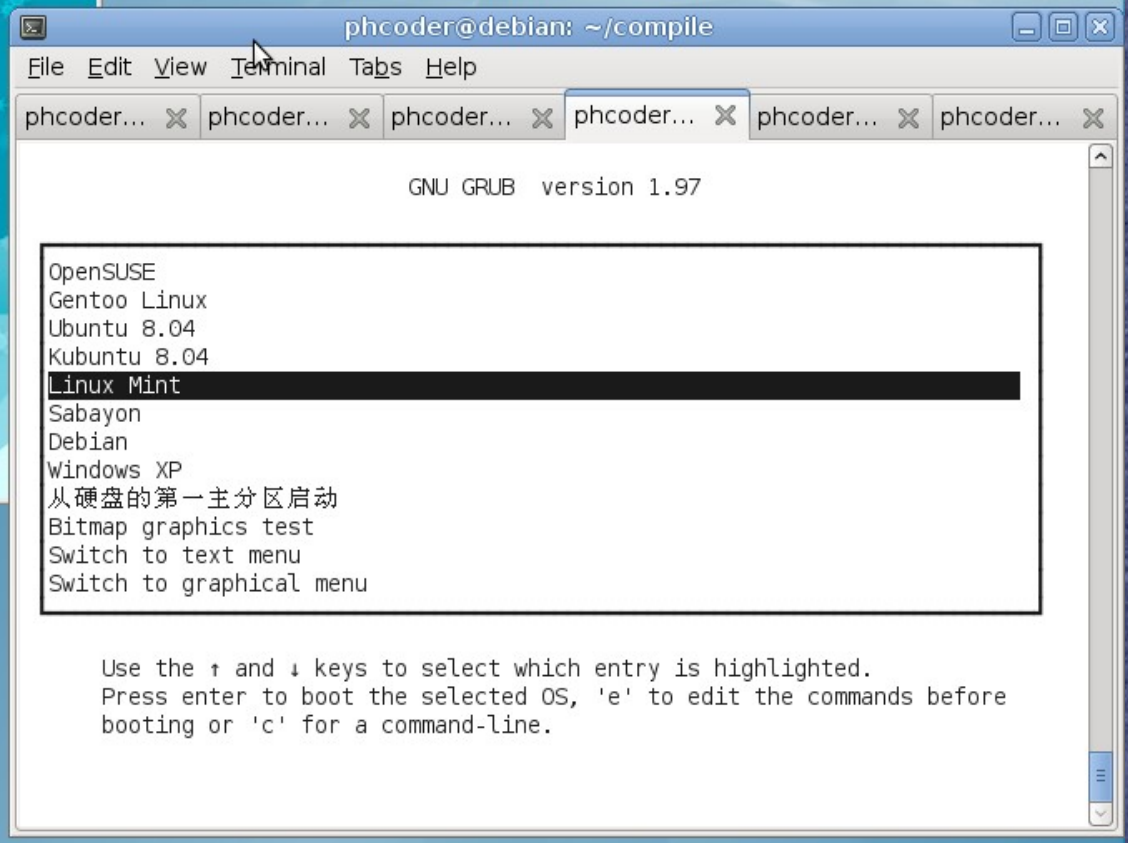
- LVM
- RAID
- Direct hw access possibility
- Bootable from CD on most platforms (grub-mkrescue).
- Creates multi-platform Cds/DVDs
- Extensible and flexible authentication framework
- Sendkey (BIOS-only)

Advantages (continued)

- Autodetection config support (optional)
- Vendor power-on button.
- Hotkeys support.
- Upcoming: braille support


GRUB OS selection
קרמלל(טוֹב) לְךָ
Gentoo Linux الرملل جداً لِةَ
To boot the selected operating system using default settings, press return. For additional settings, press E


QEMU
GNUGRUBboot loader
Boot Menu
GRand Unified Bootloader
GNU GRUB boot loade
This is the Winter theme ... brought to you by GRUB!
Kubuntu 8.04
Linux Mint
Sabayon
Debian
Windows XP
Select an item with the arrow keys and press Enter to boot.
Press: 'c' for command line; 't' to switch to non-graphical menu.


phcoder@debian: ~/compile
File Edit View Terminal Tabs Help
phcoder... phcoder... phcoder... phcoder... phcoder... phcoder...
GNU GRUB version 1.97
OpenSUSE
Gentoo Linux
Ubuntu 8.04
Kubuntu 8.04
Linux Mint
Sabayon
Debian
Windows XP
从硬盘的第一主分区启动
Bitmap graphics test
Switch to text menu
Switch to graphical menu
Use the ↑ and ↓ keys to select which entry is highlighted.
Press enter to boot the selected OS, 'e' to edit the commands before
booting or 'c' for a command-line.

Transition problems and solutions

- BIOS bugs.
- New configuration. But menu.lst is supported.
- Different defaults.
- Need to package it.
- Don't forget to create BIOS Boot Partition.

Questions?