

# Recompilando o Kernel do Gentoo p/ uso do USB

por LuizFBozo

Ago / 2008

## Configurando o Kernel: /usr/src/linux/make menuconfig

```
root@VADER_BOZO:/usr/src/linux
.config - Linux Kernel v2.6.25-gentoo-r7 Configuration

Linux Kernel Configuration
Arrow keys navigate the menu. <Enter> selects submenus --->. Highlighted letters are hotkeys. Pressing <Y> includes, <N> excludes, <M>
modularizes features. Press <Esc><Esc> to exit, <?> for Help, </> for Search. Legend: [*] built-in [ ] excluded <M> module < > module capable

General setup --->
[*] Enable loadable module support --->
-- Enable the block layer --->
Processor type and features --->
Power management options --->
Bus options (PCI etc.) --->
Executable file formats / Emulations --->
Networking --->
Device Drivers --->
Firmware Drivers --->
File systems --->
Kernel hacking --->
Security options --->
[ ] Cryptographic API --->
[*] Virtualization --->
Library routines --->
---
Load an Alternate Configuration File
Save an Alternate Configuration File

<Select> < Exit > < Help >
```

root@VADER\_BOZO:/usr/src/linux

.config - Linux Kernel v2.6.25-gentoo-r7 Configuration

#### General setup

Arrow keys navigate the menu. <Enter> selects submenus --->. Highlighted letters are hotkeys. Pressing <Y> includes, <N> excludes, <M> modularizes features. Press <Esc><Esc> to exit, <?> for Help, </> for Search. Legend: [\*] built-in [ ] excluded <M> module < > module capable

#### [\*] Prompt for development and/or incomplete code/drivers

```
() Local version - append to kernel release
[*] Automatically append version information to the version string
[*] Support for paging of anonymous memory (swap)
[*] System V IPC
[*] POSIX Message Queues
[ ] BSD Process Accounting
[ ] Export task/process statistics through netlink (EXPERIMENTAL)
[ ] Auditing support
<*> Kernel .config support
[*] Enable access to .config through /proc/config.gz
(18) Kernel log buffer size (16 => 64KB, 17 => 128KB)
[ ] Control Group support
[*] Group CPU scheduler
[*] Group scheduling for SCHED_OTHER
[ ] Group scheduling for SCHED_RR/FIFO
    Basis for grouping tasks (user id) --->
[*] Create deprecated sysfs files
-- Kernel->user space relay support (formerly relayfs)
-- Namespaces support
[ ] UTS namespace
[ ] IPC namespace
[ ] User namespace (EXPERIMENTAL)
[ ] PID Namespaces (EXPERIMENTAL)
[*] Initial RAM filesystem and RAM disk (initramfs/initrd) support
() Initramfs source file(s)
[*] Optimize for size (Look out for broken compilers!)
```

<Select> <Exit> <Help>

Iniciar

root@VADER\_BOZO:...

Música ao pedido, mú...

telas

tela2\_k\_c.JPG - Paint

PT Desktop

10:13

root@VADER\_BOZO:/usr/src/linux

.config - Linux Kernel v2.6.25-gentoo-r7 Configuration

Prompt for development and/or incomplete code/drivers

CONFIG\_EXPERIMENTAL:

Some of the various things that Linux supports (such as network drivers, file systems, network protocols, etc.) can be in a state of development where the functionality, stability, or the level of testing is not yet high enough for general use. This is usually known as the "alpha-test" phase among developers. If a feature is currently in alpha-test, then the developers usually discourage uninformed widespread use of this feature by the general public to avoid "Why doesn't this work?" type mail messages. However, active testing and use of these systems is welcomed. Just be aware that it may not meet the normal level of reliability or it may fail to work in some special cases. Detailed bug reports from people familiar with the kernel internals are usually welcomed by the developers (before submitting bug reports, please read the documents <file:README>, <file:MAINTAINERS>, <file:REPORTING-BUGS>, <file:Documentation/BUG-HUNTING>, and <file:Documentation/oops-tracing.txt> in the kernel source).

This option will also make obsoleted drivers available. These are drivers that have been replaced by something else, and/or are scheduled to be removed in a future kernel release.

Unless you intend to help test and develop a feature or driver that falls into this category, or you have a situation that requires using these features, you should probably say N here, which will cause the configurator to present you with fewer choices. If you say Y here, you will be offered the choice of using features or drivers that are currently considered to be in the alpha-test phase.

Symbol: EXPERIMENTAL [=y]

Prompt: Prompt for development and/or incomplete code/drivers  
Defined at init/Kconfig:21

Location:

-> General setup

( 98%)

< Exit >

Iniciar

root@VADER\_BOZO:...

Música ao pedido, mú...

telas

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10:15

root@VADER\_BOZO:/usr/src/linux

.config - Linux Kernel v2.6.25-gentoo-r7 Configuration

### Linux Kernel Configuration

Arrow keys navigate the menu. <Enter> selects submenus --->. Highlighted letters are hotkeys. Pressing <Y> includes, <N> excludes, <M> modularizes features. Press <Esc><Esc> to exit, <?> for Help, </> for Search. Legend: [\*] built-in [ ] excluded <M> module < > module capable

General setup --->

☒ Enable loadable module support --->

--\* Enable the block layer --->

Processor type and features --->

Power management options --->

Bus options (PCI etc.) --->

Executable file formats / Emulations --->

Networking --->

Device Drivers --->

Firmware Drivers --->

File systems --->

Kernel hacking --->

Security options --->

[ ] Cryptographic API --->

[\*] Virtualization --->

Library routines --->

---

Load an Alternate Configuration File

Save an Alternate Configuration File

<Select>

< Exit >

< Help >

Iniciar

root@VADER\_BOZO:...

Música ao pedido, mú...

telas

tela4\_k\_c.JPG - Paint

PT Desktop 10:38

root@VADER\_BOZO:/usr/src/linux

.config - Linux Kernel v2.6.25-gentoo-r7 Configuration

Enable loadable module support

Arrow keys navigate the menu. <Enter> selects submenus --->. Highlighted letters are hotkeys. Pressing <Y> includes, <N> excludes, <M> modularizes features. Press <Esc><Esc> to exit, <?> for Help, </> for Search. Legend: [\*] built-in [ ] excluded <M> module < > module capable

-- Enable loadable module support

- [\*] Module unloading
- [\*] Forced module unloading
- [\*] Module versioning support
- [\*] Source checksum for all modules
- [\*] Automatic kernel module loading

<Select> < Exit > < Help >

Iniciar

root@VADER\_BOZO:...

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PT Desktop

10:39



root@VADER\_BOZO:/usr/src/linux

.config - Linux Kernel v2.6.25-gentoo-r7 Configuration

Enable loadable module support

CONFIG\_MODULES:

Kernel modules are small pieces of compiled code which can be inserted in the running kernel, rather than being permanently built into the kernel. You use the "modprobe" tool to add (and sometimes remove) them. If you say Y here, many parts of the kernel can be built as modules (by answering M instead of Y where indicated): this is most useful for infrequently used options which are not required for booting. For more information, see the man pages for modprobe, lsmod, modinfo, insmod and rmmod.

If you say Y here, you will need to run "make modules\_install" to put the modules under /lib/modules/ where modprobe can find them (you may need to be root to do this).

If unsure, say Y.

Symbol: MODULES [=y]

Prompt: Enable loadable module support

Defined at init/Kconfig:783

(100%)

< Exit >

Iniciar

root@VADER\_BOZO:...

Música ao pedido, mú...

telas

tela5\_k\_c.JPG - Paint

PT Desktop 10:40

root@VADER\_BOZO:/usr/src/linux

.config - Linux Kernel v2.6.25-gentoo-r7 Configuration

### Linux Kernel Configuration

Arrow keys navigate the menu. <Enter> selects submenus --->. Highlighted letters are hotkeys. Pressing <Y> includes, <N> excludes, <M> modularizes features. Press <Esc><Esc> to exit, <?> for Help, </> for Search. Legend: [\*] built-in [ ] excluded <M> module < > module capable

```
General setup --->
[*] Enable loadable module support --->
-- Enable the block layer --->
Processor type and features --->
Power management options --->
Bus options (PCI etc.) --->
Executable file formats / Emulations --->
Networking --->
Device Drivers --->
Firmware Drivers --->
File systems --->
Kernel hacking --->
Security options --->
[ ] Cryptographic API --->
[*] Virtualization --->
Library routines --->
---
Load an Alternate Configuration File
Save an Alternate Configuration File
```

<Select> < Exit > < Help >

Iniciar

root@VADER\_BOZO:...

Música ao pedido, mú...

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PT Desktop 14:09



root@VADER\_BOZO:/usr/src/linux

.config - Linux Kernel v2.6.25-gentoo-r7 Configuration

#### Device Drivers

Arrow keys navigate the menu. <Enter> selects submenus --->. Highlighted letters are hotkeys. Pressing <Y> includes, <N> excludes, <M> modularizes features. Press <Esc><Esc> to exit, <?> for Help, </> for Search. Legend: [\*] built-in [ ] excluded <M> module < > module capable

#### Generic Driver Options --->

```
< > Connector - unified userspace <-> kernelspace linker --->
< > Memory Technology Device (MTD) support --->
< > Parallel port support --->
-* Plug and Play support --->
[*] Block devices --->
[*] Misc devices --->
< * > ATA/ATAPI/MFM/RLL support --->
    SCSI device support --->
< * > Serial ATA (prod) and Parallel ATA (experimental) drivers --->
[*] Multiple devices driver support (RAID and LVM) --->
[*] Fusion MPT device support --->
    IEEE 1394 (FireWire) support --->
< > I2O device support --->
[*] Macintosh device drivers --->
[*] Network device support --->
< > ISDN support --->
< > Telephony support --->
    Input device support --->
    Character devices --->
< > I2C support --->
    SPI support --->
< > Dallas's 1-wire support --->
-* Power supply class support --->
< > Hardware Monitoring support --->
-* Generic Thermal sysfs driver --->
[ ] Watchdog Timer Support --->
```

<Select> < Exit > < Help >

Iniciar

root@VADER\_BOZO:...

Música ao pedido, mú...

telas

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14:10

root@VADER\_BOZO:/usr/src/linux

.config - Linux Kernel v2.6.25-gentoo-r7 Configuration

#### Generic Driver Options

Arrow keys navigate the menu. <Enter> selects submenus --->. Highlighted letters are hotkeys. Pressing <Y> includes, <N> excludes, <M> modularizes features. Press <Esc><Esc> to exit, <?> for Help, </> for Search. Legend: [\*] built-in [ ] excluded <M> module < > module capable

(//sbin/hotplug) path to uevent helper

[\*] Select only drivers that don't need compile-time external firmware

[\*] Prevent firmware from being built

<M> Userspace firmware loading support

[ ] Driver Core verbose debug messages

[ ] Managed device resources verbose debug messages

<Select>

< Exit >

< Help >

Iniciar

root@VADER\_BOZO:...

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14:11

root@VADER\_BOZO:/usr/src/linux

.config - Linux Kernel v2.6.25-gentoo-r7 Configuration

path to uevent helper

CONFIG\_UEVENT\_HELPER\_PATH:

Path to uevent helper program forked by the kernel for every uevent.

Symbol: UEVENT\_HELPER\_PATH [=/sbin/hotplug]

Prompt: path to uevent helper

Defined at drivers/base/Kconfig:3

Depends on: HOTPLUG

Location:

-> Device Drivers

-> Generic Driver Options

(100%)

< Exit >

Iniciar

root@VADER\_BOZO:...

Música ao pedido, mú...

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14:12

root@VADER\_BOZO:/usr/src/linux

.config - Linux Kernel v2.6.25-gentoo-r7 Configuration

#### Device Drivers

Arrow keys navigate the menu. <Enter> selects submenus --->. Highlighted letters are hotkeys. Pressing <Y> includes, <N> excludes, <M> modularizes features. Press <Esc><Esc> to exit, <?> for Help, </> for Search. Legend: [\*] built-in [ ] excluded <M> module < > module capable

```
<*> Serial ATA (prod) and Parallel ATA (experimental) drivers --->
[*] Multiple devices driver support (RAID and LVM) --->
[*] Fusion MPT device support --->
    IEEE 1394 (FireWire) support --->
< > I2O device support --->
[*] Macintosh device drivers --->
[*] Network device support --->
< > ISDN support --->
< > Telephony support --->
    Input device support --->
    Character devices --->
< > I2C support --->
    SPI support --->
< > Dallas's 1-wire support --->
--* Power supply class support --->
< > Hardware Monitoring support --->
--* Generic Thermal sysfs driver --->
[ ] Watchdog Timer Support --->
    Sonics Silicon Backplane --->
    Multifunction device drivers --->
    Multimedia devices --->
    Graphics support --->
    Sound --->
    [*] HID Devices --->
    [*] USB support --->
< > MMC/SD card support --->
< > Sony MemoryStick card support (EXPERIMENTAL) --->
```

<Select> < Exit > < Help >

Iniciar

root@VADER\_BOZO:...

Música ao pedido, mú...

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PT Desktop 14:34

root@VADER\_BOZO:/usr/src/linux

.config - Linux Kernel v2.6.25-gentoo-r7 Configuration

#### HID Devices

Arrow keys navigate the menu. <Enter> selects submenus --->. Highlighted letters are hotkeys. Pressing <Y> includes, <N> excludes, <M> modularizes features. Press <Esc><Esc> to exit, <?> for Help, </> for Search. Legend: [\*] built-in [ ] excluded <M> module < > module capable

##### --- HID Devices

{M} Generic HID support

[\*] HID debugging support

[\*] /dev/hidraw raw HID device support

##### \*\*\* USB Input Devices \*\*\*

<M> USB Human Interface Device (full HID) support

[ ] Enable support for Apple laptop/aluminum USB special keys

[\*] Force feedback support (EXPERIMENTAL)

[\*] PID device support

[ ] Logitech devices support

[ ] PantherLord/GreenAsia based device support

[ ] ThrustMaster devices support (EXPERIMENTAL)

[ ] Zeroplus based game controller support

[\*] /dev/hiddev raw HID device support

USB HID Boot Protocol drivers --->

<Select>

< Exit >

< Help >

Iniciar

root@VADER\_BOZO:...

Música ao pedido, mú...

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PT Desktop 14:36

root@VADER\_BOZO:/usr/src/linux

.config - Linux Kernel v2.6.25-gentoo-r7 Configuration

/dev/hidraw raw HID device support

CONFIG\_HIDRAW:

Say Y here if you want to support HID devices (from the USB specification standpoint) that aren't strictly user interface devices, like monitor controls and Uninterruptable Power Supplies.

This module supports these devices separately using a separate event interface on /dev/hidraw.

There is also a /dev/hiddev configuration option in the USB HID configuration menu. In comparison to hiddev, this device does not process the hid events at all (no parsing, no lookups). This lets applications to work on raw hid events when they want to, and avoid using transport-specific userspace libhid/libusb libraries.

If unsure, say Y.

Symbol: HIDRAW [=y]

Prompt: /dev/hidraw raw HID device support

Defined at drivers/hid/Kconfig:49

Depends on: HID\_SUPPORT && HID

Location:

-> Device Drivers

-> HID Devices (HID\_SUPPORT [=y])

-> Generic HID support (HID [=m])

(100%)

< Exit >

Iniciar

root@VADER\_BOZO:...

Música ao pedido, mú...

telas

tela12\_k\_c.JPG - Paint

PT Desktop 14:37



root@VADER\_BOZO:/usr/src/linux

.config - Linux Kernel v2.6.25-gentoo-r7 Configuration

#### HID Devices

Arrow keys navigate the menu. <Enter> selects submenus --->. Highlighted letters are hotkeys. Pressing <Y> includes, <N> excludes, <M> modularizes features. Press <Esc><Esc> to exit, <?> for Help, </> for Search. Legend: [\*] built-in [ ] excluded <M> module < > module capable

#### --- HID Devices

```
(M) Generic HID support
[*]   HID debugging support
[*]   /dev/hidraw raw HID device support
*** USB Input Devices ***
<M> USB Human Interface Device (full HID) support
[ ]   Enable support for Apple laptop/aluminum USB special keys
[*]   Force feedback support (EXPERIMENTAL)
[*]   PID device support
[ ]   Logitech devices support
[ ]   PantherLord/GreenAsia based device support
[ ]   ThrustMaster devices support (EXPERIMENTAL)
[ ]   Zeroplus based game controller support
[*]   /dev/hiddev raw HID device support
      USB HID Boot Protocol drivers --->
```

<Select> <Exit> <Help>

Iniciar

root@VADER\_BOZO:...

Música ao pedido, mú...

telas

tela13\_k\_c.JPG - Paint

PT Desktop 14:40

root@VADER\_BOZO:/usr/src/linux

.config - Linux Kernel v2.6.25-gentoo-r7 Configuration

/dev/hiddev raw HID device support

CONFIG\_USB\_HIDDEV:

Say Y here if you want to support HID devices (from the USB specification standpoint) that aren't strictly user interface devices, like monitor controls and Uninterruptable Power Supplies.

This module supports these devices separately using a separate event interface on /dev/usb/hiddevX (char 180:96 to 180:111).

If unsure, say Y.

Symbol: USB\_HIDDEV [=y]

Prompt: /dev/hiddev raw HID device support

Defined at drivers/hid/usbhid/Kconfig:101

Depends on: HID\_SUPPORT && USB\_HID

Location:

-> Device Drivers

-> HID Devices (HID\_SUPPORT [=y])

-> USB Human Interface Device (full HID) support (USB\_HID [=m])

< Exit >

(100%)

Iniciar

root@VADER\_BOZO:...

Música ao pedido, mú...

telas

tela14\_k\_c.JPG - Paint

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14:41

root@VADER\_BOZO:/usr/src/linux

.config - Linux Kernel v2.6.25-gentoo-r7 Configuration

#### Device Drivers

Arrow keys navigate the menu. <Enter> selects submenus --->. Highlighted letters are hotkeys. Pressing <Y> includes, <N> excludes, <M> modularizes features. Press <Esc><Esc> to exit, <?> for Help, </> for Search. Legend: [\*] built-in [ ] excluded <M> module < > module capable

```
[*] Network device support --->
< > ISDN support --->
< > Telephony support --->
    Input device support --->
    Character devices --->
< > I2C support --->
    SPI support --->
< > Dallas's 1-wire support --->
-* Power supply class support --->
< > Hardware Monitoring support --->
-* Generic Thermal sysfs driver --->
[ ] Watchdog Timer Support --->
    Sonics Silicon Backplane --->
    Multifunction device drivers --->
    Multimedia devices --->
    Graphics support --->
    Sound --->
[*] HID Devices --->
[*] USB support --->
< > MMC/SD card support --->
< > Sony MemoryStick card support (EXPERIMENTAL) --->
[ ] LED Support --->
< > InfiniBand support --->
[ ] EDAC - error detection and reporting (EXPERIMENTAL) --->
< > Real Time Clock --->
[ ] DMA Engine support --->
    Userspace I/O --->
```

<Select> < Exit > < Help >

Iniciar

root@VADER\_BOZO:...

Música ao pedido, mú...

telas

tela15\_k\_c.JPG - Paint

PT Desktop

14:44

root@VADER\_BOZO:/usr/src/linux

.config - Linux Kernel v2.6.25-gentoo-r7 Configuration

### USB support

Arrow keys navigate the menu. <Enter> selects submenus --->. Highlighted letters are hotkeys. Pressing <Y> includes, <N> excludes, <M> modularizes features. Press <Esc><Esc> to exit, <?> for Help, </> for Search. Legend: [\*] built-in [ ] excluded <M> module < > module capable

#### -- USB support

```
<M> Support for Host-side USB
[ ] USB verbose debug messages
[*] USB announce new devices
    *** Miscellaneous USB options ***
[*] USB device filesystem
[*] USB device class-devices (DEPRECATED)
[*] Dynamic USB minor allocation (EXPERIMENTAL)
[*] USB selective suspend/resume and wakeup
[ ] USB device persistence during system suspend (DANGEROUS)
    *** USB Host Controller Drivers ***
<M> EHCI HCD (USB 2.0) support
    [ ] Root Hub Transaction Translators (EXPERIMENTAL)
    [ ] Improved Transaction Translator scheduling (EXPERIMENTAL)
< > ISP116X HCD support
<M> OHCI HCD support
    [*] OHCI support for Broadcom SSB OHCI core
<M> UHCI HCD (most Intel and VIA) support
< > SL811HS HCD support
< > R8A66597 HCD support
    *** USB Device Class drivers ***
<M> USB Modem (CDC ACM) support
<M> USB Printer support
    *** NOTE: USB_STORAGE enables SCSI, and 'SCSI disk support' ***
    *** may also be needed; see USB_STORAGE Help for more information ***
<M> USB Mass Storage support
[ ] USB Mass Storage verbose debug
```

<Select> < Exit > < Help >

Iniciar

root@VADER\_BOZO:...

Música ao pedido, mú...

telas

tela16\_k\_c.JPG - Paint

PT Desktop 14:47

root@VADER\_BOZO:/usr/src/linux

.config - Linux Kernel v2.6.25-gentoo-r7 Configuration

### USB support

CONFIG\_USB\_SUPPORT:

This option adds core support for Universal Serial Bus (USB).  
You will also need drivers from the following menu to make use of it.

Symbol: USB\_SUPPORT [=y]

Prompt: USB support

Defined at drivers/usb/Kconfig:5

Depends on: HAS\_IOMEM

Location:

-> Device Drivers

< Exit >

(100%)

Iniciar

root@VADER\_BOZO:...

Música ao pedido, mú...

telas

tela17\_k\_c.JPG - Paint

PT Desktop

14:49



root@VADER\_BOZO:/usr/src/linux

.config - Linux Kernel v2.6.25-gentoo-r7 Configuration

#### USB support

Arrow keys navigate the menu. <Enter> selects submenus --->. Highlighted letters are hotkeys. Pressing <Y> includes, <N> excludes, <M> modularizes features. Press <Esc><Esc> to exit, <?> for Help, </> for Search. Legend: [\*] built-in [ ] excluded <M> module < > module capable

```
*** NOTE: USB_STORAGE enables SCSI, and 'SCSI disk support' ***
*** may also be needed; see USB_STORAGE Help for more information ***
<M> USB Mass Storage support
[ ]   USB Mass Storage verbose debug
[ ]   Datafab Compact Flash Reader support (EXPERIMENTAL)
[ ]   Freecom USB/ATAPI Bridge support
[ ]   ISD-200 USB/ATA Bridge support
[ ]   Microtech/ZiO! CompactFlash/SmartMedia support
[ ]   USBAT/USBATO2-based storage support (EXPERIMENTAL)
[ ]   SanDisk SDDR-09 (and other SmartMedia) support (EXPERIMENTAL)
[ ]   SanDisk SDDR-55 SmartMedia support (EXPERIMENTAL)
[ ]   Lexar Jumpshot Compact Flash Reader (EXPERIMENTAL)
[ ]   Olympus MAUSB-10/Fuji DPC-R1 support (EXPERIMENTAL)
[ ]   Support for Rio Karma music player
[ ]   The shared table of common (or usual) storage devices
*** USB Imaging devices ***
< > USB Mustek MDC800 Digital Camera support (EXPERIMENTAL)
< > Microtek X6USB scanner support
[*] USB Monitor
*** USB port drivers ***
<M> USB Serial Converter support --->
*** USB Miscellaneous drivers ***
< > EMI 6|2m USB Audio interface support
< > EMI 2|6 USB Audio interface support
< > ADU devices from Ontrak Control Systems (EXPERIMENTAL)
< > USB Auerswald ISDN support (EXPERIMENTAL)
< > USB Diamond Rio500 support (EXPERIMENTAL)
```

<Select> < Exit > < Help >

Iniciar

root@VADER\_BOZO:...

Música ao pedido, mú...

telas

tela18\_k\_c.JPG - Paint

PT Desktop 14:54



root@VADER\_BOZO:/usr/src/linux

.config - Linux Kernel v2.6.25-gentoo-r7 Configuration

#### USB support

Arrow keys navigate the menu. <Enter> selects submenus --->. Highlighted letters are hotkeys. Pressing <Y> includes, <N> excludes, <M> modularizes features. Press <Esc><Esc> to exit, <?> for Help, </> for Search. Legend: [\*] built-in [ ] excluded <M> module < > module capable

```
< > USB Mustek MDC800 Digital Camera support (EXPERIMENTAL)
< > Microtek X6USB scanner support
[*] USB Monitor
*** USB port drivers ***
<M> USB Serial Converter support --->
*** USB Miscellaneous drivers ***
< > EMI 6|2m USB Audio interface support
< > EMI 2|6 USB Audio interface support
< > ADU devices from Ontrak Control Systems (EXPERIMENTAL)
< > USB Auerswald ISDN support (EXPERIMENTAL)
< > USB Diamond Rio500 support (EXPERIMENTAL)
< > USB Lego Infrared Tower support (EXPERIMENTAL)
<M> USB LCD driver support
< > USB BlackBerry recharge support
<M> USB LED driver support
< > Cypress CY7C63xxx USB driver support
< > Cypress USB thermometer driver support
< > USB Phidgets drivers
< > Siemens ID USB Mouse Fingerprint sensor support
< > Elan PCMCIA CardBus Adapter USB Client
< > Apple Cinema Display support
< > USB 2.0 SVGA dongle support (Net2280/SiS315)
<M> USB LD driver
< > PlayStation 2 Trance Vibrator driver support
< > IO Warrior driver support
< > USB testing driver (DEVELOPMENT)
< > USB Gadget Support --->
```

<Select> < Exit > < Help >

Iniciar

root@VADER\_BOZO:...

Música ao pedido, mú...

telas

tela19\_k\_c.JPG - Paint

PT Desktop

14:55

## Compilando: /usr/src/linux/make

root@VADER\_BOZO:/usr/src/linux

```
VADER_BOZO linux # make
scripts/kconfig/conf -s arch/x86/Kconfig
CHK      include/linux/version.h
CHK      include/linux/utsrelease.h
CALL     scripts/checksyscalls.sh
CHK      include/linux/compile.h
dnsdomainname: Unknown host
GZIP     kernel/config_data.gz
IKCFG    kernel/config_data.h
CC       kernel/configs.o
LD       kernel/built-in.o
LD       drivers/base/built-in.o
CC [M]   drivers/base/firmware_class.o
LD       drivers/built-in.o
LD       vmlinux.o
MODPOST  vmlinux.o
WARNING: modpost: Found 25 section mismatch(es).
To see full details build your kernel with:
'make CONFIG_DEBUG_SECTION_MISMATCH=y'
GEN      .version
CHK      include/linux/compile.h
dnsdomainname: Unknown host
UPD      include/linux/compile.h
CC       init/version.o
LD       init/built-in.o
LD       .tmp_vmlinux1
KSYM     .tmp_kallsyms1.S
AS       .tmp_kallsyms1.o
LD       .tmp_vmlinux2
KSYM     .tmp_kallsyms2.S
AS       .tmp_kallsyms2.o
LD       vmlinux
SYSMAP   System.map
SYSMAP   .tmp_System.map
CC       arch/x86/boot/version.o
LD       arch/x86/boot/setup.elf
OBJCOPY  arch/x86/boot/setup.bin
OBJCOPY  arch/x86/boot/compressed/vmlinux.bin
GZIP     arch/x86/boot/compressed/vmlinux.bin.gz
LD       arch/x86/boot/compressed/piggy.o
LD       arch/x86/boot/compressed/vmlinux
```

Iniciar

root@VADER\_BOZO:...

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PT Desktop 15:02

## Compilando: /usr/src/linux/make

root@VADER\_BOZO:/usr/src/linux

```
LD      drivers/base/built-in.o
CC [M]  drivers/base/firmware_class.o
LD      drivers/built-in.o
LD      vmlinux.o
MODPOST vmlinux.o
WARNING: modpost: Found 25 section mismatch(es).
To see full details build your kernel with:
'make CONFIG_DEBUG_SECTION_MISMATCH=y'
GEN      .version
CHK      include/linux/compile.h
dnsdomainname: Unknown host
UPD      include/linux/compile.h
CC      init/version.o
LD      init/built-in.o
LD      .tmp_vmlinux1
KSYM     .tmp_kallsyms1.S
AS       .tmp_kallsyms1.o
LD      .tmp_vmlinux2
KSYM     .tmp_kallsyms2.S
AS       .tmp_kallsyms2.o
LD      vmlinux
SYSMAP   System.map
SYSMAP   .tmp_System.map
CC      arch/x86/boot/version.o
LD      arch/x86/boot/setup.elf
OBJCOPY  arch/x86/boot/setup.bin
OBJCOPY  arch/x86/boot/compressed/vmlinux.bin
GZIP     arch/x86/boot/compressed/vmlinux.bin.gz
LD      arch/x86/boot/compressed/piggy.o
LD      arch/x86/boot/compressed/vmlinux
OBJCOPY  arch/x86/boot/vmlinux.bin
BUILD   arch/x86/boot/bzImage
Root device is (8, 3)
Setup is 11416 bytes (padded to 11776 bytes).
System is 2679 kB
Kernel: arch/x86/boot/bzImage is ready (#3)
Building modules, stage 2.
MODPOST 19 modules
CC      drivers/base/firmware_class.mod.o
LD [M]  drivers/base/firmware_class.ko
VADER_BOZO linux #
```

Iniciar

root@VADER\_BOZO:...

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PT Desktop 15:02

## Instalando módulos: /usr/src/linux/make modules\_install

root@VADER\_BOZO:/usr/src/linux

```
SYSMAP System.map
SYSMAP .tmp_System.map
CC arch/x86/boot/version.o
LD arch/x86/boot/setup.elf
OBJCOPY arch/x86/boot/setup.bin
OBJCOPY arch/x86/boot/compressed/vmlinux.bin
GZIP arch/x86/boot/compressed/vmlinux.bin.gz
LD arch/x86/boot/compressed/piggy.o
LD arch/x86/boot/compressed/vmlinux
OBJCOPY arch/x86/boot/vmlinux.bin
BUILD arch/x86/boot/bzImage
Root device is (8, 3)
Setup is 11416 bytes (padded to 11776 bytes).
System is 2679 kB
Kernel: arch/x86/boot/bzImage is ready (#3)
Building modules, stage 2.
MODPOST 19 modules
CC drivers/base/firmware_class.mod.o
LD [M] drivers/base/firmware_class.ko
VADER_BOZO linux # make modules_install
INSTALL drivers/base/firmware_class.ko
INSTALL drivers/hid/hid.ko
INSTALL drivers/hid/usbhid/usbhid.ko
INSTALL drivers/input/input-polldev.ko
INSTALL drivers/net/s2io.ko
INSTALL drivers/scsi/scsi_wait_scan.ko
INSTALL drivers/uio/uio.ko
INSTALL drivers/usb/class/cdc-acm.ko
INSTALL drivers/usb/class/usb_lp.ko
INSTALL drivers/usb/core/usbcore.ko
INSTALL drivers/usb/host/ehci-hcd.ko
INSTALL drivers/usb/host/ohci-hcd.ko
INSTALL drivers/usb/host/uhci-hcd.ko
INSTALL drivers/usb/misc/ldusb.ko
INSTALL drivers/usb/misc/usb_lcd.ko
INSTALL drivers/usb/misc/usb_led.ko
INSTALL drivers/usb/mon/usbmon.ko
INSTALL drivers/usb/serial/usbserial.ko
INSTALL drivers/usb/storage/usb-storage.ko
DEPMOD 2.6.25-gentoo-r7
VADER_BOZO linux #
```

Iniciar

root@VADER\_BOZO:...

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PT Desktop 15:08

## Verificando dispositivo ativo: /dev/ dmesg | less

```
root@VADER_BOZO:/dev
usbcore: registered new interface driver hiddev
usbcore: registered new interface driver usbhid
drivers/hid/usbhid/hid-core.c: v2.6:USB HID core driver
oprofile: using NMI interrupt.
TCP cubic registered
NET: Registered protocol family 1
NET: Registered protocol family 10
IPv6 over IPv4 tunneling driver
NET: Registered protocol family 17
RPC: Registered udp transport module.
RPC: Registered tcp transport module.
ieee1394: Host added: ID:BUS[0-00:1023]  GUID[0090270001b880ba]
kjournald starting.  Commit interval 5 seconds
EXT3-fs: mounted filesystem with ordered data mode.
VFS: Mounted root (ext3 filesystem) readonly.
Freeing unused kernel memory: 364k freed
EXT3 FS on sda3, internal journal
Adding 2939884k swap on /dev/sda2.  Priority:-1 extents:1 across:2939884k
ADDRCONF(NETDEV_UP): eth0: link is not ready
e1000: eth0: e1000_watchdog: NIC Link is Up 100 Mbps Full Duplex, Flow Control: RX/TX
e1000: eth0: e1000_watchdog: 10/100 speed: disabling TSO
ADDRCONF(NETDEV_CHANGE): eth0: link becomes ready
eth0: no IPv6 routers present
hub 2-0:1.0: unable to enumerate USB device on port 4
usb 6-2: new full speed USB device using uhci_hcd and address 2
usb 6-2: configuration #1 chosen from 1 choice
hiddev0hidraw0: USB HID v1.01 Device [MicroCPD VADER_DU1] on usb-0000:00:1d.1-2
usb 6-2: New USB device found, idVendor=04d8, idProduct=0033
usb 6-2: New USB device strings: Mfr=1, Product=2, SerialNumber=0
usb 6-2: Product: VADER_DU1
usb 6-2: Manufacturer: MicroCPD
hub 6-0:1.0: port 2 disabled by hub (EMI?), re-enabling...
usb 6-2: USB disconnect, address 2
usb 6-2: new full speed USB device using uhci_hcd and address 3
usb 6-2: configuration #1 chosen from 1 choice
hiddev0hidraw0: USB HID v1.01 Device [MicroCPD VADER_DU1] on usb-0000:00:1d.1-2
usb 6-2: New USB device found, idVendor=04d8, idProduct=0033
usb 6-2: New USB device strings: Mfr=1, Product=2, SerialNumber=0
usb 6-2: Product: VADER_DU1
usb 6-2: Manufacturer: MicroCPD
lines 491-530/530 (END)
```

Iniciar

root@VADER\_BOZO:...

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## Verificando controladores ativos: /dev/ lspci -v | grep USB

root@VADER\_BOZO:/dev

```
VADER_BOZO dev # lspci -v | grep USB
```

```
00:1a.0 USB Controller: Intel Corporation 82801H (ICH8 Family) USB UHCI Controller #4 (rev 02) (prog-if 00 [UHCI])
00:1a.1 USB Controller: Intel Corporation 82801H (ICH8 Family) USB UHCI Controller #5 (rev 02) (prog-if 00 [UHCI])
00:1a.7 USB Controller: Intel Corporation 82801H (ICH8 Family) USB2 EHCI Controller #2 (rev 02) (prog-if 20 [EHCI])
00:1d.0 USB Controller: Intel Corporation 82801H (ICH8 Family) USB UHCI Controller #1 (rev 02) (prog-if 00 [UHCI])
00:1d.1 USB Controller: Intel Corporation 82801H (ICH8 Family) USB UHCI Controller #2 (rev 02) (prog-if 00 [UHCI])
00:1d.2 USB Controller: Intel Corporation 82801H (ICH8 Family) USB UHCI Controller #3 (rev 02) (prog-if 00 [UHCI])
00:1d.7 USB Controller: Intel Corporation 82801H (ICH8 Family) USB2 EHCI Controller #1 (rev 02) (prog-if 20 [EHCI])
VADER_BOZO dev #
```

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root@VADER\_BOZO:...

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## Verificando informações em /proc/bus/usb usando lsusb: /dev/ lsusb e lsusb -t (tree)

```
root@VADER_BOZO:/dev
VADER_BOZO dev # lsusb
Bus 007 Device 001: ID 1d6b:0001
Bus 004 Device 001: ID 1d6b:0001
Bus 003 Device 001: ID 1d6b:0001
Bus 006 Device 003: ID 04d8:0033 Microchip Technology, Inc.
Bus 006 Device 001: ID 1d6b:0001
Bus 005 Device 001: ID 1d6b:0001
Bus 002 Device 001: ID 1d6b:0002
Bus 001 Device 001: ID 1d6b:0002
VADER_BOZO dev # lsusb -t
Bus# 7
`-Dev# 1 Vendor 0x1d6b Product 0x0001
Bus# 6
`-Dev# 1 Vendor 0x1d6b Product 0x0001
  `--Dev# 3 Vendor 0x04d8 Product 0x0033
Bus# 5
`-Dev# 1 Vendor 0x1d6b Product 0x0001
Bus# 4
`-Dev# 1 Vendor 0x1d6b Product 0x0001
Bus# 3
`-Dev# 1 Vendor 0x1d6b Product 0x0001
Bus# 2
`-Dev# 1 Vendor 0x1d6b Product 0x0002
Bus# 1
`-Dev# 1 Vendor 0x1d6b Product 0x0002
VADER_BOZO dev #
```

Windows taskbar at the bottom shows: Iniciar, root@VADER\_BOZO:..., Música ao pedido, mú..., telas, tela25\_k\_c.JPG - Paint, Microsoft PowerPoint ..., PT Desktop, 16:02.

## Verificando informações em /proc/bus/usb usando lsusb: /dev/ lsusb -v (completo)

root@VADER\_BOZO:/dev

VADER\_BOZO dev # lsusb -v | more

Bus 007 Device 001: ID 1d6b:0001

Device Descriptor:

```
bLength          18
bDescriptorType   1
bcdUSB            1.10
bDeviceClass      9 Hub
bDeviceSubClass   0 Unused
bDeviceProtocol   0 Full speed (or root) hub
bMaxPacketSize0   64
idVendor          0x1d6b
idProduct         0x0001
bcdDevice         2.06
iManufacturer     3 Linux 2.6.25-gentoo-r7 uhci_hcd
iProduct          2 UHCI Host Controller
iSerial           1 0000:00:1d.2
bNumConfigurations 1
```

Configuration Descriptor:

```
bLength          9
bDescriptorType   2
wTotalLength      25
bNumInterfaces    1
bConfigurationValue 1
iConfiguration    0
bmAttributes      0xe0
  Self Powered
  Remote Wakeup
```

MaxPower 0mA

Interface Descriptor:

```
bLength          9
bDescriptorType   4
bInterfaceNumber  0
bAlternateSetting  0
bNumEndpoints     1
bInterfaceClass   9 Hub
bInterfaceSubClass 0 Unused
bInterfaceProtocol 0 Full speed (or root) hub
iInterface        0
```

Endpoint Descriptor:

```
bLength          7
```

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root@VADER\_BOZO:...

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## Verificando informações em /proc/bus/usb usando lsusb: /dev/ lsusb -v (completo)

root@VADER\_BOZO:/dev

```
idVendor      0x1d6b
idProduct     0x0001
bcdDevice     2.06
iManufacturer 3 Linux 2.6.25-gentoo-r7 uhci_hcd
iProduct      2 UHCI Host Controller
iSerial       1 0000:00:1a.1
bNumConfigurations 1
Configuration Descriptor:
  bLength        9
  bDescriptorType 2
  wTotalLength   25
  bNumInterfaces 1
  bConfigurationValue 1
  iConfiguration 0
  bmAttributes   0xe0
    Self Powered
    Remote Wakeup
  MaxPower       0mA
Interface Descriptor:
  bLength        9
  bDescriptorType 4
  bInterfaceNumber 0
  bAlternateSetting 0
  bNumEndpoints 1
  bInterfaceClass 9 Hub
  bInterfaceSubClass 0 Unused
  bInterfaceProtocol 0 Full speed (or root) hub
  iInterface     0
Endpoint Descriptor:
  bLength        7
  bDescriptorType 5
  bEndpointAddress 0x81 EP 1 IN
  bmAttributes   3
    Transfer Type      Interrupt
    Synch Type         None
    Usage Type         Data
  wMaxPacketSize  0x0002 1x 2 bytes
  bInterval      255
Hub Descriptor:
  bLength        9
--More--
```

Iniciar

root@VADER\_BOZO:...

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16:21

## Verificando informações em /proc/bus/usb usando lsusb: /dev/ lsusb -v (completo)

root@VADER\_BOZO:/dev

Hub Descriptor:

bLength 9  
bDescriptorType 41  
nNbrPorts 2  
wHubCharacteristic 0x000a  
No power switching (usb 1.0)  
Per-port overcurrent protection  
bPwrOn2PwrGood 1 \* 2 milli seconds  
bHubContrCurrent 0 milli Ampere  
DeviceRemovable 0x00  
PortPwrCtrlMask 0xff

Hub Port Status:

Port 1: 0000.0100 power  
Port 2: 0000.0100 power

Device Status: 0x0003

Self Powered  
Remote Wakeup Enabled

Bus 003 Device 001: ID 1d6b:0001

Device Descriptor:

bLength 18  
bDescriptorType 1  
bcdUSB 1.10  
bDeviceClass 9 Hub  
bDeviceSubClass 0 Unused  
bDeviceProtocol 0 Full speed (or root) hub  
bMaxPacketSize0 64  
idVendor 0x1d6b  
idProduct 0x0001  
bcdDevice 2.06  
iManufacturer 3 Linux 2.6.25-gentoo-r7 uhci\_hcd  
iProduct 2 UHCI Host Controller  
iSerial 1 0000:00:1a.0  
bNumConfigurations 1

Configuration Descriptor:

bLength 9  
bDescriptorType 2  
wTotalLength 25  
bNumInterfaces 1  
bConfigurationValue 1

--More--

Iniciar

root@VADER\_BOZO:...

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## Verificando informações em /proc/bus/usb usando lsusb: /dev/ lsusb -v (completo)

root@VADER\_BOZO:/dev

### Configuration Descriptor:

```
bLength          9
bDescriptorType   2
wTotalLength     25
bNumInterfaces    1
bConfigurationValue 1
iConfiguration    0
bmAttributes      0xe0
  Self Powered
  Remote Wakeup
```

```
MaxPower          0mA
```

### Interface Descriptor:

```
bLength          9
bDescriptorType   4
bInterfaceNumber  0
bAlternateSetting  0
bNumEndpoints     1
bInterfaceClass    9 Hub
bInterfaceSubClass 0 Unused
bInterfaceProtocol 0 Full speed (or root) hub
iInterface         0
```

### Endpoint Descriptor:

```
bLength          7
bDescriptorType   5
bEndpointAddress  0x81 EP 1 IN
bmAttributes       3
  Transfer Type    Interrupt
  Synch Type       None
  Usage Type       Data
  wMaxPacketSize   0x0002 1x 2 bytes
  bInterval        255
```

### Hub Descriptor:

```
bLength          9
bDescriptorType   41
nNbrPorts         2
wHubCharacteristic 0x000a
  No power switching (usb 1.0)
  Per-port overcurrent protection
bPwrOn2PwrGood    1 * 2 milli seconds
bHubContrCurrent   0 milli Ampere
```

--More--

Iniciar

root@VADER\_BOZO:...

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16:24

## Verificando informações em /proc/bus/usb usando lsusb: /dev/ lsusb -v (completo)

root@VADER\_BOZO:/dev

```
Per-port overcurrent protection
bPwrOn2PwrGood      1 * 2 milli seconds
bHubContrCurrent     0 milli Ampere
DeviceRemovable      0x00
PortPwrCtrlMask      0xff
Hub Port Status:
  Port 1: 0000.0100 power
  Port 2: 0000.0100 power
Device Status:       0x0003
  Self Powered
  Remote Wakeup Enabled

Bus 006 Device 003: ID 04d8:0033 Microchip Technology, Inc.
Device Descriptor:
  bLength                18
  bDescriptorType         1
  bcdUSB                  2.00
  bDeviceClass             0 (Defined at Interface level)
  bDeviceSubClass          0
  bDeviceProtocol          0
  bMaxPacketSize0          8
  idVendor                 0x04d8 Microchip Technology, Inc.
  idProduct                0x0033
  bcdDevice                0.01
  iManufacturer           1 MicroCPD
  iProduct                2 VADER_DU1
  iSerial                 0
  bNumConfigurations       1
Configuration Descriptor:
  bLength                  9
  bDescriptorType           2
  wTotalLength             41
  bNumInterfaces            1
  bConfigurationValue       1
  iConfiguration            0
  bmAttributes              0xa0
    (Bus Powered)
    Remote Wakeup
  MaxPower                 100mA
Interface Descriptor:
  bLength                  9
```

Iniciar

root@VADER\_BOZO:...

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16:27



## Verificando informações em /proc/bus/usb usando lsusb: /dev/ lsusb -v (completo)

```
root@VADER_BOZO:/dev
MaxPower          100mA
Interface Descriptor:
  bLength          9
  bDescriptorType   4
  bInterfaceNumber  0
  bAlternateSetting 0
  bNumEndpoints     2
  bInterfaceClass   3 Human Interface Device
  bInterfaceSubClass 0 No Subclass
  bInterfaceProtocol 0 None
  iInterface        0
    HID Device Descriptor:
      bLength        9
      bDescriptorType 33
      bcdHID         1.01
      bCountryCode    0 Not supported
      bNumDescriptors 1
      bDescriptorType 34 Report
      wDescriptorLength 47
    Report Descriptors:
      ** UNAVAILABLE **
Endpoint Descriptor:
  bLength          7
  bDescriptorType   5
  bEndpointAddress 0x81 EP 1 IN
  bmAttributes      3
    Transfer Type    Interrupt
    Synch Type       None
    Usage Type       Data
  wMaxPacketSize    0x0040 1x 64 bytes
  bInterval         1
Endpoint Descriptor:
  bLength          7
  bDescriptorType   5
  bEndpointAddress 0x01 EP 1 OUT
  bmAttributes      3
    Transfer Type    Interrupt
    Synch Type       None
    Usage Type       Data
  wMaxPacketSize    0x0040 1x 64 bytes
  bInterval         1
```

Windows taskbar: Iniciar | root@VADER\_BOZO:... | Música ao pedido, mú... | telas | tela32\_k\_c.JPG - Paint | Microsoft PowerPoint ... | PT Desktop 16:29

## Verificando informações em /proc/bus/usb usando lsusb: /dev/ lsusb -v (completo)

```
root@VADER_BOZO:/dev

Transfer Type          Interrupt
Synch Type            None
Usage Type            Data
wMaxPacketSize        0x0040 1x 64 bytes
bInterval              1
Device Status:        0x0000
                        (Bus Powered)

Bus 006 Device 001: ID 1d6b:0001
Device Descriptor:
  bLength                18
  bDescriptorType         1
  bcdUSB                 1.10
  bDeviceClass            9 Hub
  bDeviceSubClass         0 Unused
  bDeviceProtocol         0 Full speed (or root) hub
  bMaxPacketSize0         64
  idVendor                0x1d6b
  idProduct               0x0001
  bcdDevice              2.06
  iManufacturer          3 Linux 2.6.25-gentoo-r7 uhci_hcd
  iProduct                2 UHCI Host Controller
  iSerial                1 0000:00:1d.1
  bNumConfigurations      1
Configuration Descriptor:
  bLength                9
  bDescriptorType         2
  wTotalLength           25
  bNumInterfaces          1
  bConfigurationValue     1
  iConfiguration          0
  bmAttributes            0xe0
    Self Powered
    Remote Wakeup
  MaxPower                0mA
Interface Descriptor:
  bLength                9
  bDescriptorType         4
  bInterfaceNumber        0
  bAlternateSetting        0
--More--
```

Windows taskbar at the bottom shows: Iniciar, root@VADER\_BOZO:..., Música ao pedido, mú..., telas, tela33\_k\_c.JPG - Paint, Microsoft PowerPoint ..., PT Desktop, 16:32

as informações continuam para os demais dispositivos...