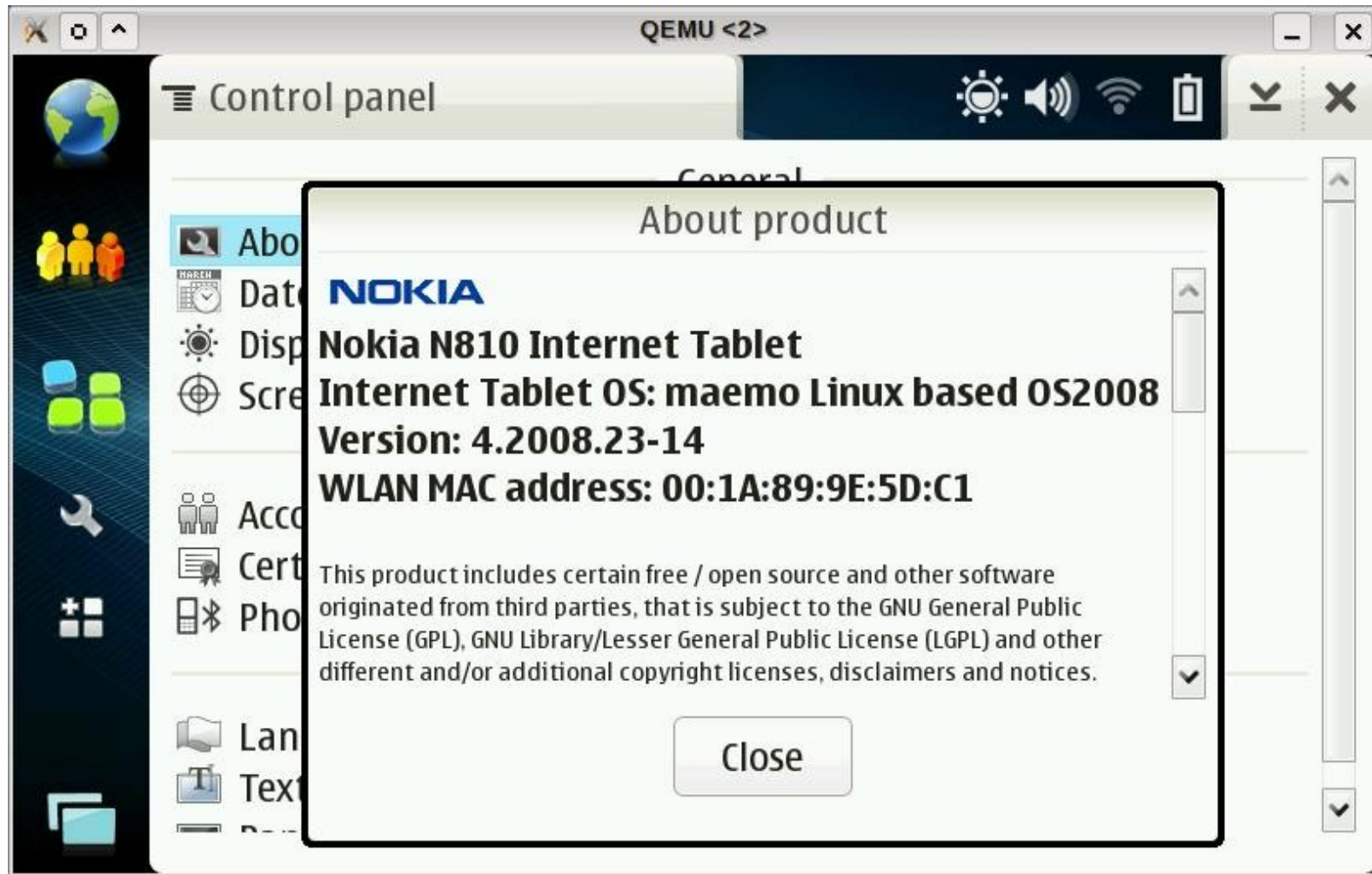


# Maemo in QEMU

Marcin Juskiewicz

[maemo@haerwu.biz](mailto:maemo@haerwu.biz)  
<http://blog.haerwu.biz/>

# How it looks?



# What is emulated

- OMAP2 CPU
- N800 tablet keypad
- N810 tablet keyboard
- touchscreen
- flash chip
- SD card slot
- USB network adapter (QEMU add-on)
- USB keyboard (QEMU add-on)

# What is missing

- OMAP2 DSP part
- Integrated camera
- WiFi
- FM tuner
- Sound
- Bluetooth (work in progress)
- Second SD slot (can be added)
- GPS (can be added from Openmoko Neo)

# What is needed

- QEMU from SVN repository (tested with r5224)
- Poky from SVN repository (tested with r5197)
- Maemo image (Chinook or Diablo)
- Nokia flasher (or 0xffff)
- Fast computer (64bit Linux preferred)
- mtd1 dump from tablet with LifeGuard disabled
- TUN/TAP support in kernel (for networking)

# Preparing image

- Fetch Diablo image
- Unpack it using Nokia Flasher
- Create image with those commands:
  - `poky-nokia800-flashutil initfs.jffs2 maemo-image.qemuflash initfs`
  - `poky-nokia800-flashutil config.mtd maemo-image.qemuflash config`
  - `poky-nokia800-flashutil rootfs.jffs2 maemo-image.qemuflash rootfs`

# Booting

```
sudo qemu-system-arm -kernel zImage  
-net nic,model=usb,vlan=0  
-net tap,vlan=0,ifname=tap0,  
script=poky-qemu-ifup,  
downscript=poky-qemu-ifdown  
-mtdblock diablo.qemuflash  
-m 128 -M n810 -show-cursor  
-usb -usbdevice net:0  
-usbdevice keyboard
```

# Potential problems

- Network is via 'eth0' but since libconic only deals with WiFi and Bluetooth, a "Dummy network" is required.
- N810 keymap is hard to use on PC keyboard – emulated USB keyboard works fine
- Applications which use Xvideo (liqbase, mplayer) will not work – black screen output.

# Emulation authors

- Fabrice Bellard (QEMU author)
- Paul Brook (ARM emulation)
- Andrew Zaborowski (N8x0 emulation)

Questions?

Thank you for attention

Marcin Juszkiewicz

[maemo@haerwu.biz](mailto:maemo@haerwu.biz)  
<http://blog.haerwu.biz/>