

TV-B-Gone for the N900

- Simon Budig <simon@budig.de>
- working for kernel concepts: embedded Linux
- gromit, woof, GIMP, lots of small hacks...
- passionate about math, free software, typography
- huge NIH syndrome

TV-B-Gone for the N900

- TV-B-Gone is a universal remote to switch off TVs
- originally developed by Mitch Altman
- Open-Source-Kit available (Limor Fried + Mitch Altman)
- fun for everybody
- walking exercise for Media Markt employees

Infrared Signals for Remotes

- Pulses of IR light, typically modulated
- modulated with 30-50kHz, 38kHz is a typical value
- pulse lengths vary wildly from about 100us to a few ms
- typically some encoding scheme for binary data (e.g. RC5)
- LIRC knows a lot about this stuff.

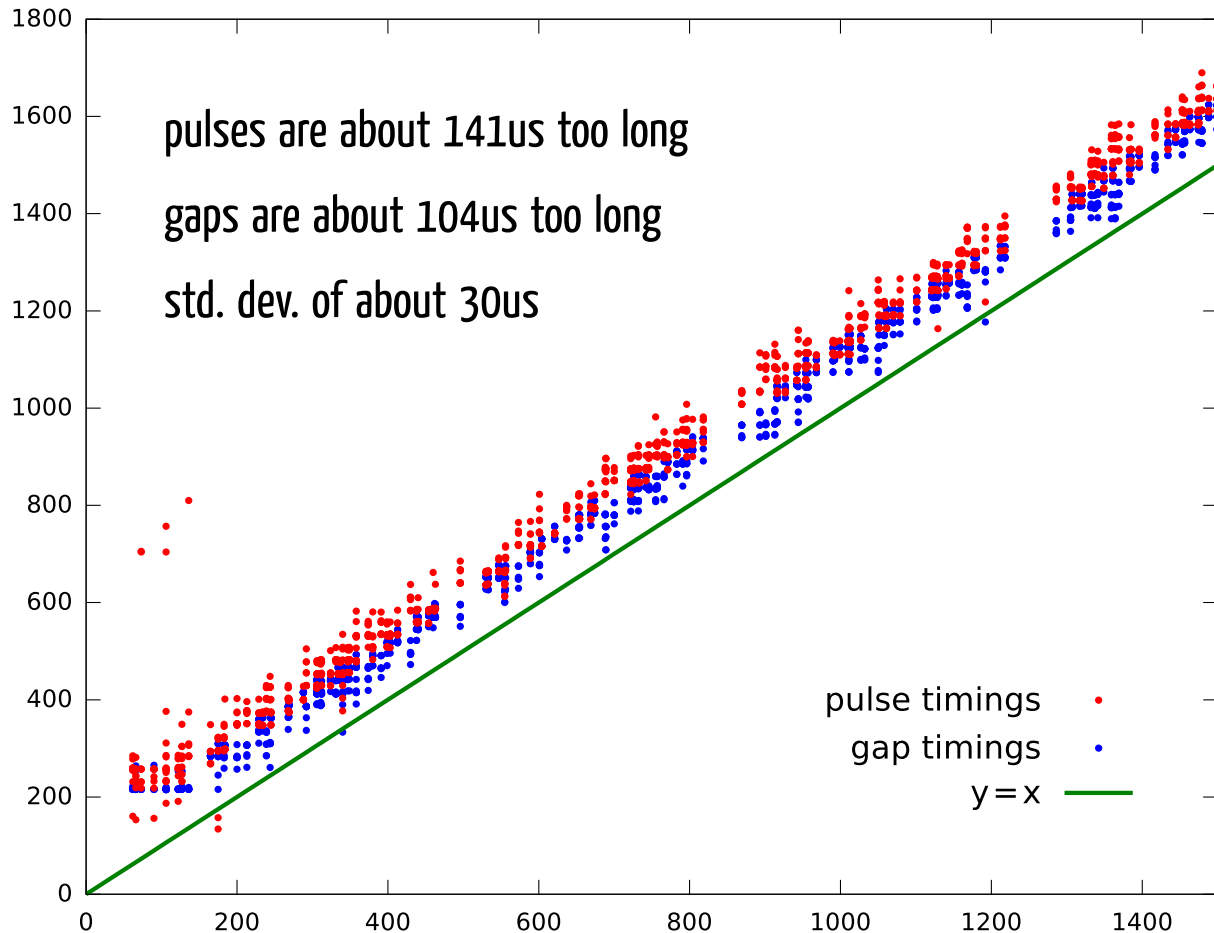
LIRC for the N900

- N900 incorporates IR transmitter (not IRDA!)
- LIRC is available in the maemo repositories
- GUI tools available: qtirreco, depend on LIRC
- major PITA: config-file mess, weird GUI, strange databases
- open socket to lircd, request specific configured code

LIRC driver (lirc_rx51)

- very straightforward:
- `ioctl()` for carrier frequency and for duty cycle
- `write()` an array of ints for pulse/gap timing in us.
- some limitations: carrier frequency 20kHz to 500kHz
- only up to 256 pulses and gaps per `write()`

lirc_rx51 timing problems



Maemo Desktop Applet

- written in python, uses the codes from the OS hardware
- rendered icon, click to start/stop, progress indicator
- settings dialog (european and north american codes)
- works when aiming at a specific TV
- ...and I am a wuss...

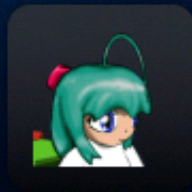
...waiting for a click...



16:00



o2 - de



Weather widget for Berlin showing current temperature and forecast.

-6°C Berlin			
-6°C	-11°C	-14°C	+1°C
-10°C	-16°C	-18°C	-3°C
Di	Mi	Do	Fr
FORECA			

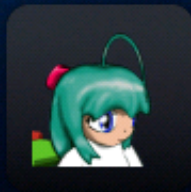
...sending codes...



16:00



o2 - de



Weather widget for Berlin:

-6°C Berlin	
-6°C	-11°C
-10°C	-16°C
Di	Mi
	Do
	Fr
	FORECA

...stopped.



16:01



o2 - de

Sent 29 standby codes in 10.6s.

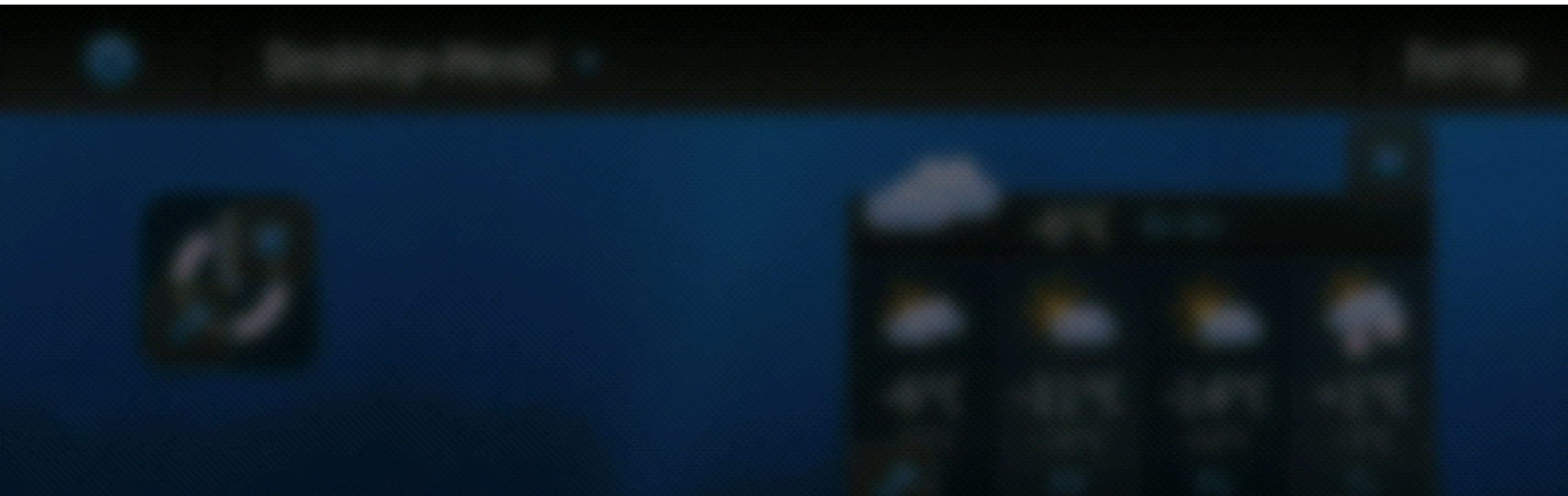


-6°C Berlin

-6°C	-11°C	-14°C	+1°C
-10°C	-16°C	-18°C	-3°C
Di	Mi	Do	Fr
FORECA			



“configuration dialog”



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currently using codes for **Europe**

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Codes scanned by Limor Fried & Mitch Altman
for the “TV-B-Gone Kit” project.

Europe

North America