OpenMoko.dk

OpenMoko

Ole Tange <ole@tange.dk>

- A revolution on your mobile phone in 4 parts

Chemnitz, February 2008

Ole Tange

- System developer at Ange Optimization (ange.dk)
- GNU/Linux since 1992
- Professionally since 1996
- Active in free software movement

- Best known for *the patented web shop, Parallel,* and *remindmail.net*
- Wiki-master for wiki.openmoko.org
- Speaks English every day

Børn - Konqueror

Location Edit View Go Bookmarks Tools Settings Window Help

Location: https://www.åbent-døgnet-rundt.dk/børn/

Action | Børn | Drama | Gyser

Åbent-Døgnet-rundt.dk's børnefilm

Mariehøne

Mariehøne.gif - Mariehøne er en hyggelig familiefilm, hvor mariehønen dolor sit amet, consectetuer adipiscing elit. Donec volutpat.

Filmen Mariehøne handler om ipsum dolor sit amet, consectetuer adipiscing elit. Donec volutpat. Vivamus eu mauris. Quisque nulla augue, tristique at, mattis et, blandit id, magna. Nullam vitae diam eget massa bibendum malesuada. Donec at magna.

Mere om mariehøns:

Bøger om mariehøns
(hos Gad.dk)
Byt film om mariehøns
(hos Den Blå Avis)

1-klik se nu i browser

1-klik hent film (mpeg4-format)

Din indkøbskurv er tom.

☒ Soundtrack.mp3 ☐ Film

Læg i indkøbskurv

☒ Send DVD eller bånd som gave til:

Anders Sand
Paradisæblevej 117
1234 A

VISA Betal med kreditkort

Få et lån

Betal via din internetydbyder

o.dk

Parallel

tange@alpha: ~
File Edit View Terminal Tabs Help
tange@8-cpu-machine:~$ ls *.jpg | parallel ./slow-command {} ">{}.out"

RemindMail.net

```
From: John Doe <john@example.org>
To: Phone company <info@example.com>
Cc: 30@RemindMail.net
Subject: Invoice for May 2004

To the Phone company.

Would it be possible for you to get me a copy of the invoice
for May 2004?

Regards,

John Doe
CustomerNo: 12345678
```

article discussion edit history

navigation

- Main Page
- Community portal
- Current events
- Recent changes
- Random page
- Help

search

Go Search

toolbox

- What links here
- Related changes
- Upload file
- Special pages
- Printable version
- Permanent link

Main Page

Languages:	English • Русский • Deutsch • Svenska • 简体中文 • Polski • Nederlands • Eesti • 한국어 • Français • Español • Română • Български • Ελληνικά • Slovensky • Italiano • عربي • Česky • 日本語 • Português •

Welcome to the OpenMoko™ public Wiki

OpenMoko™ is an Open Source project to create the world's first free mobile phone operating system which runs a full X server and can therefore run most X applications.

The OpenMoko project is a community that anyone can join, to help design their ideal phone.

You can install any OpenMoko software over the whole range of supported phones, and if you upgrade your phone, you don't lose that software. Bugs fixed on any phone are fixed on all.

The Neo1973 from FIC is the first of possibly many phones that OpenMoko

English

- I am non-native English speaker with an accent
- *You* have a responsibility to get something from my talk

Topics

- The FIC Neo FreeRunner hardware
- The software
  - The ideas
- Price and availability
- Future developments

- Short break

- A look inside

My dream

- The *personal* computer
- Like glasses or watch
- Like a laptop – only smaller
- Storage on network

Neo FreeRunner

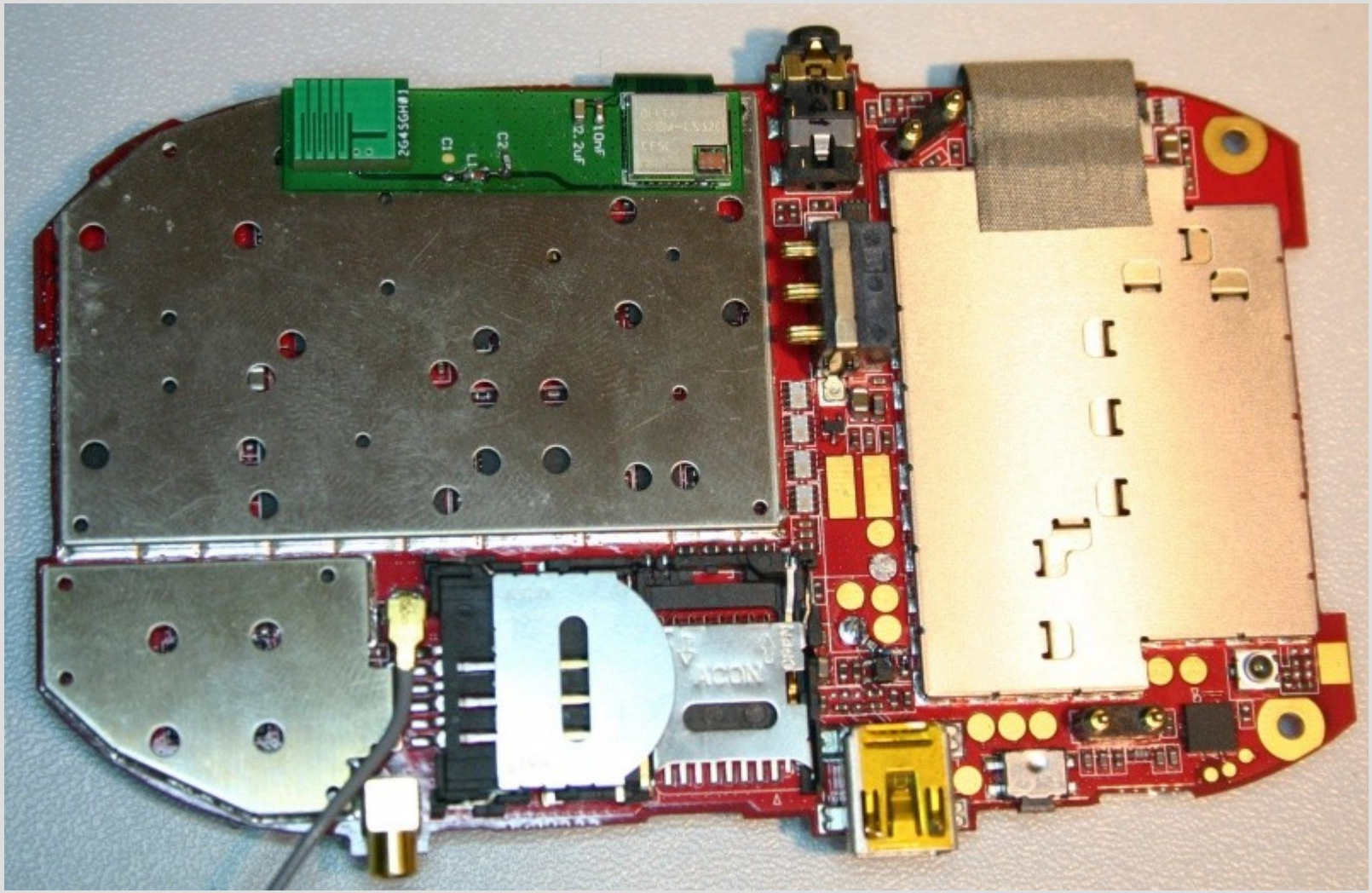
(alias Neo1973 GTA02)

- The first OpenMoko smart phone
- The hardware
  - ARM 400 Mhz
  - 128 MB RAM
  - MicroSD Flash (4 GB tested – 8GB modules coming)
  - 3D graphics chip 640x480, 280 dpi
  - Bluetooth
  - Charge and sync using USB (USB2 powered)
  - WiFi (Atheros AR6K)
  - 2 accelerometers
  - GSM 2.5G (not EDGE)
  - GPS

Revolution part I: Backing from the supplier

- FIC – First International Computer
  - The company behind
  - Honest
    - Delays with explanations
    - Rather delays than flakey hardware
      - Flakey software is fine
  - Works *with* the community
  - Profit
    - Larger margin by selling direct to consumer

How to take it apart

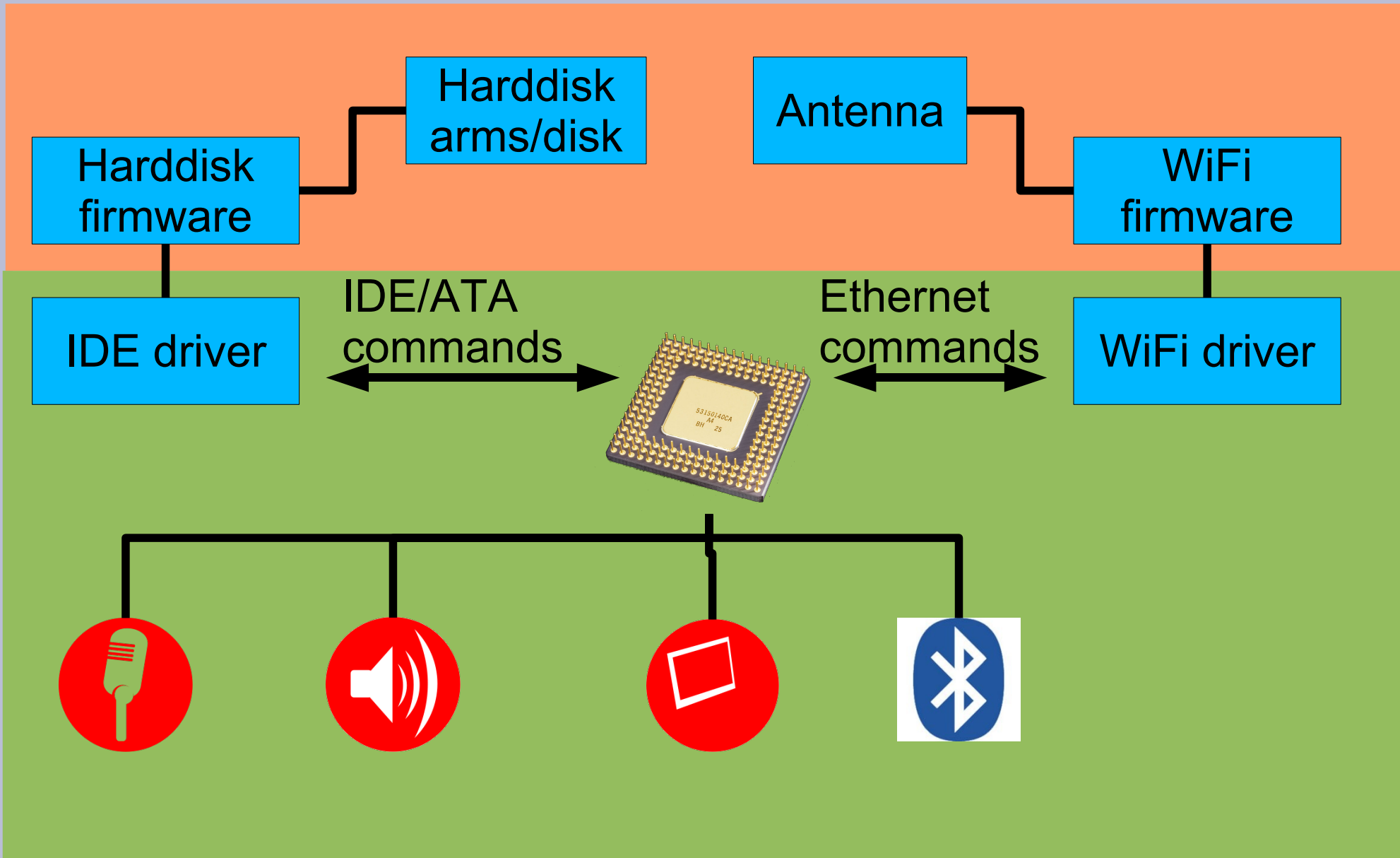


Revolution part II: The operating system

- OpenMoko GNU/Linux
  - Base for future hardware
    - Not only for phones
  - GNU/Linux with changes
    - 100% free software
  - Emulator and developer phone available today

What is libre?

- on a PC



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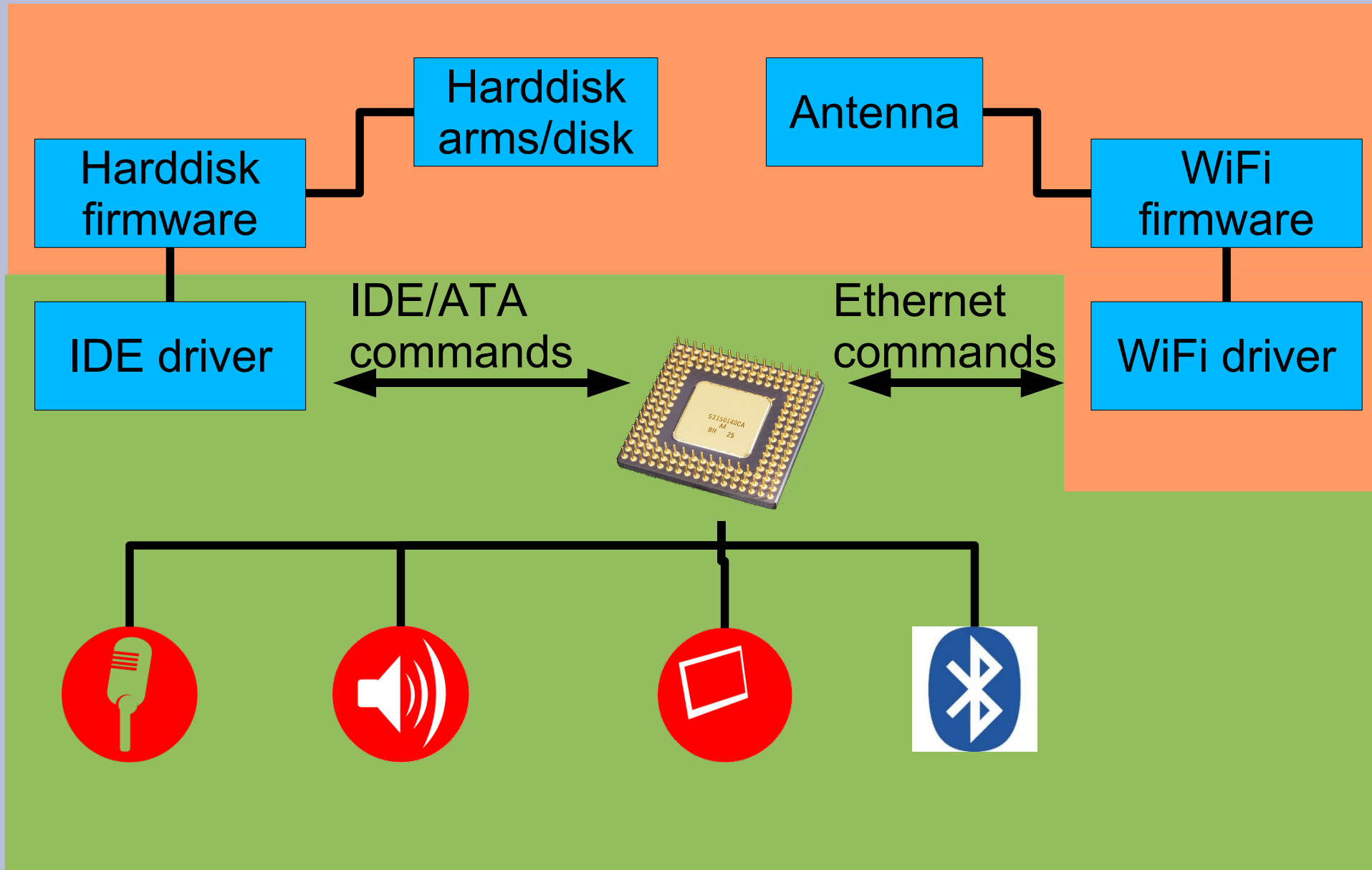

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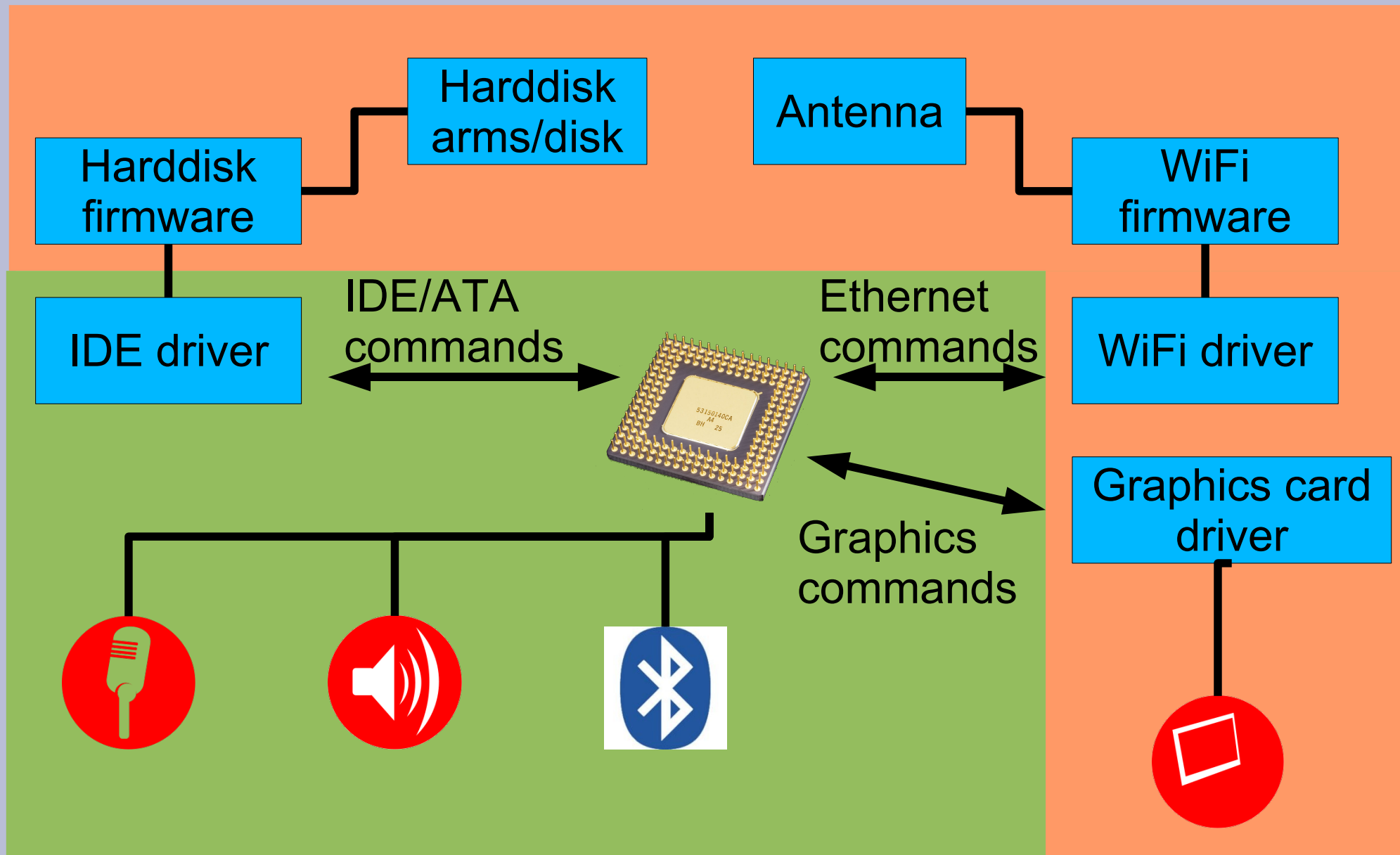
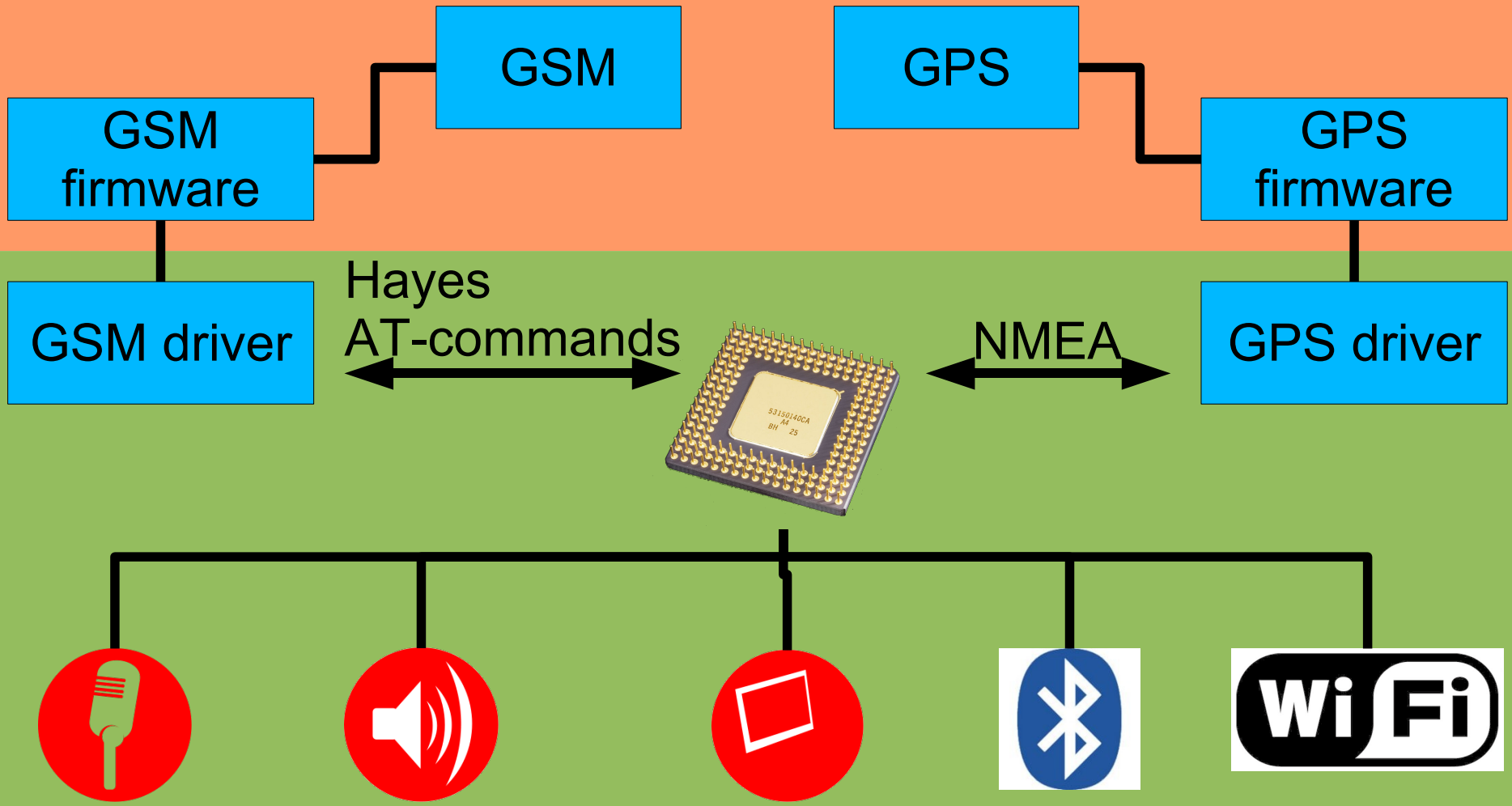


What is libre?

- on Neo FreeRunner



2007 Stylus Applications.

PHASE 1	PHASE 2
Contacts	Feed Reader
Dates	Messages
Application Manager	Preferences
Today	Media Player
	Sketchbook
	Terminal
	IM
	Web Browser
	Reader
	System Info
	Your Applications...

2007 Finger Applications.

PHASE 1	PHASE 2
Dialer	
Main Menu	Clocks Screen Saver Calculator Unit Converter Game Guitar Tuning Code Memo *Your Applications...*
Music Player	
History	

Qtopia

- Software from Trolltech's Green Phone
- Ported to Neo1973
  - Will work on Neo FreeRunner without modifications
- Released in September 2007

- Licens: GPL (non-free license is for sale)

Revolution part III: Developer

- Open posibilities for developers
  - No limitations
    - at the start
    - Later: Sandboxing (think chroot/normal user)
- Ideas
  - It is fun
  - Contribute yours

Idea: Location based calendar

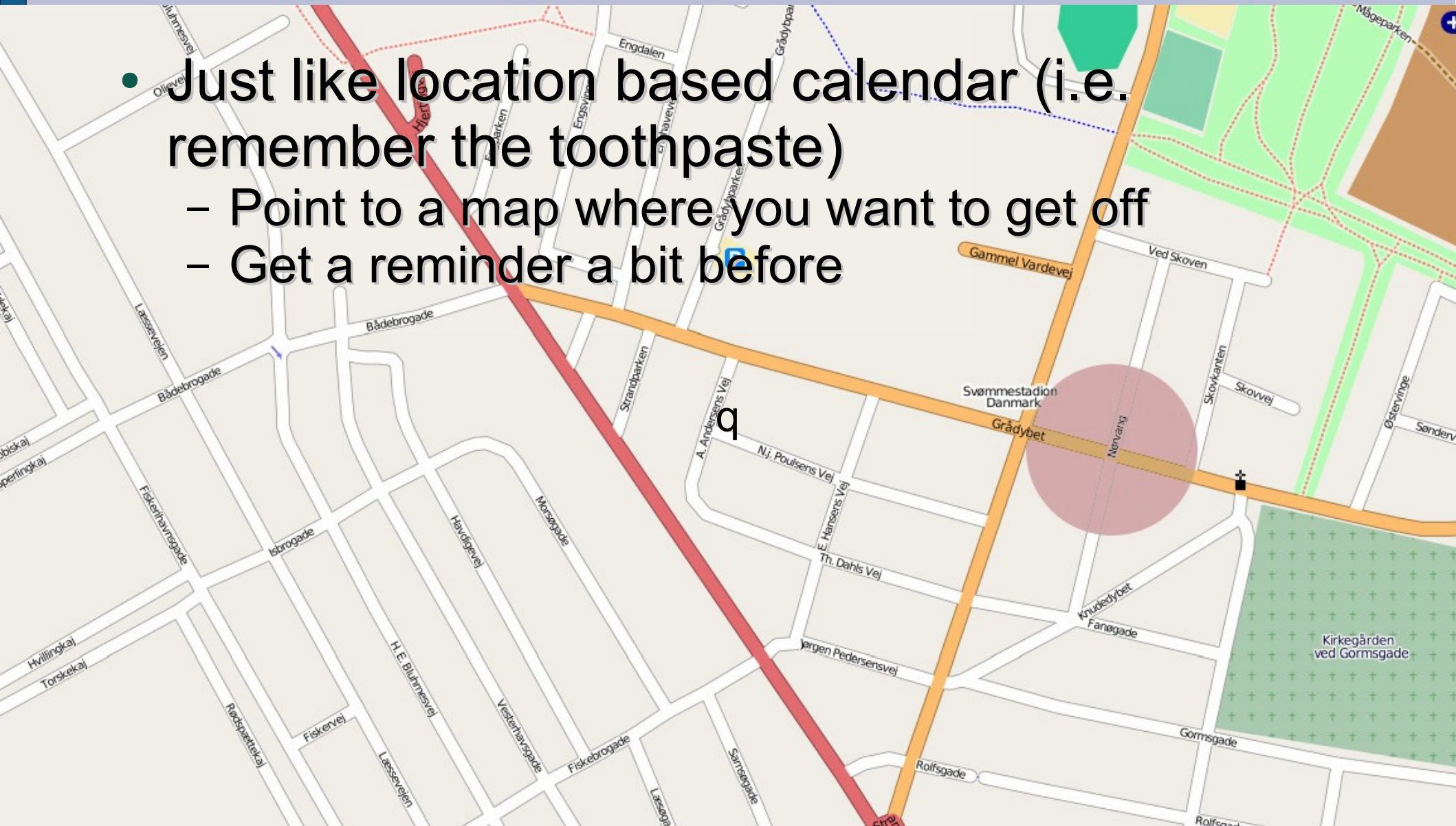
www.openmoko.dk

“Never send a human to do a machine’s job.”

Agent Smith, 1999.

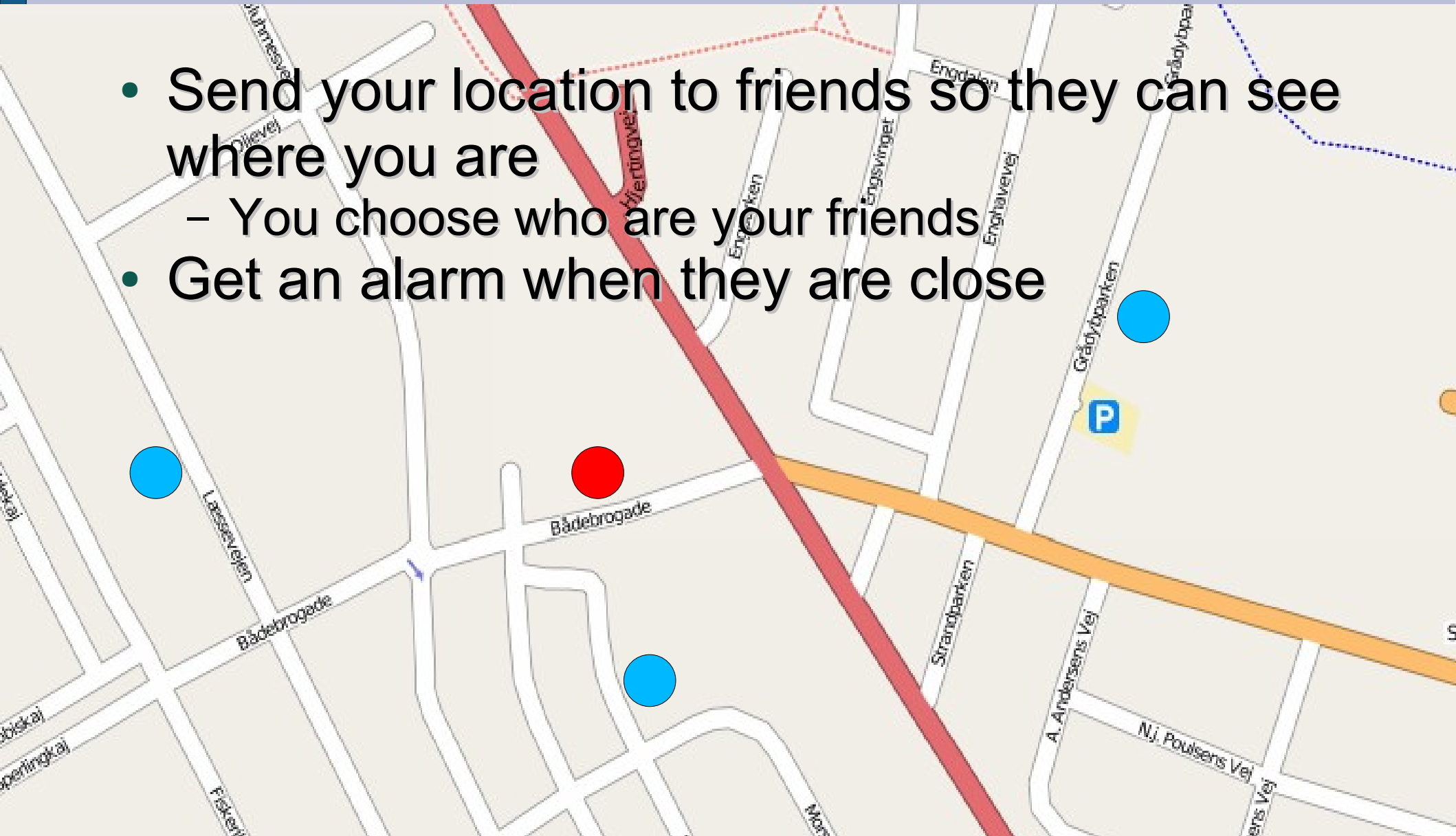
Idea: Get off at bus stop

- Just like location based calendar (i.e. remember the toothpaste)
  - Point to a map where you want to get off
  - Get a reminder a bit before



Idea: GPS Friends

- Send your location to friends so they can see where you are
  - You choose who are your friends
- Get an alarm when they are close



Idea: Closest WiFi

- If a WiFi is nearby then upload the position to a central server using the WiFi
  - This way the connection is tested
- Show a map with the nearest WiFi located

HOT
CITY
L'Internet mobile
en ville
WiFi
ZONE
P&T
LOUIS VUITTON

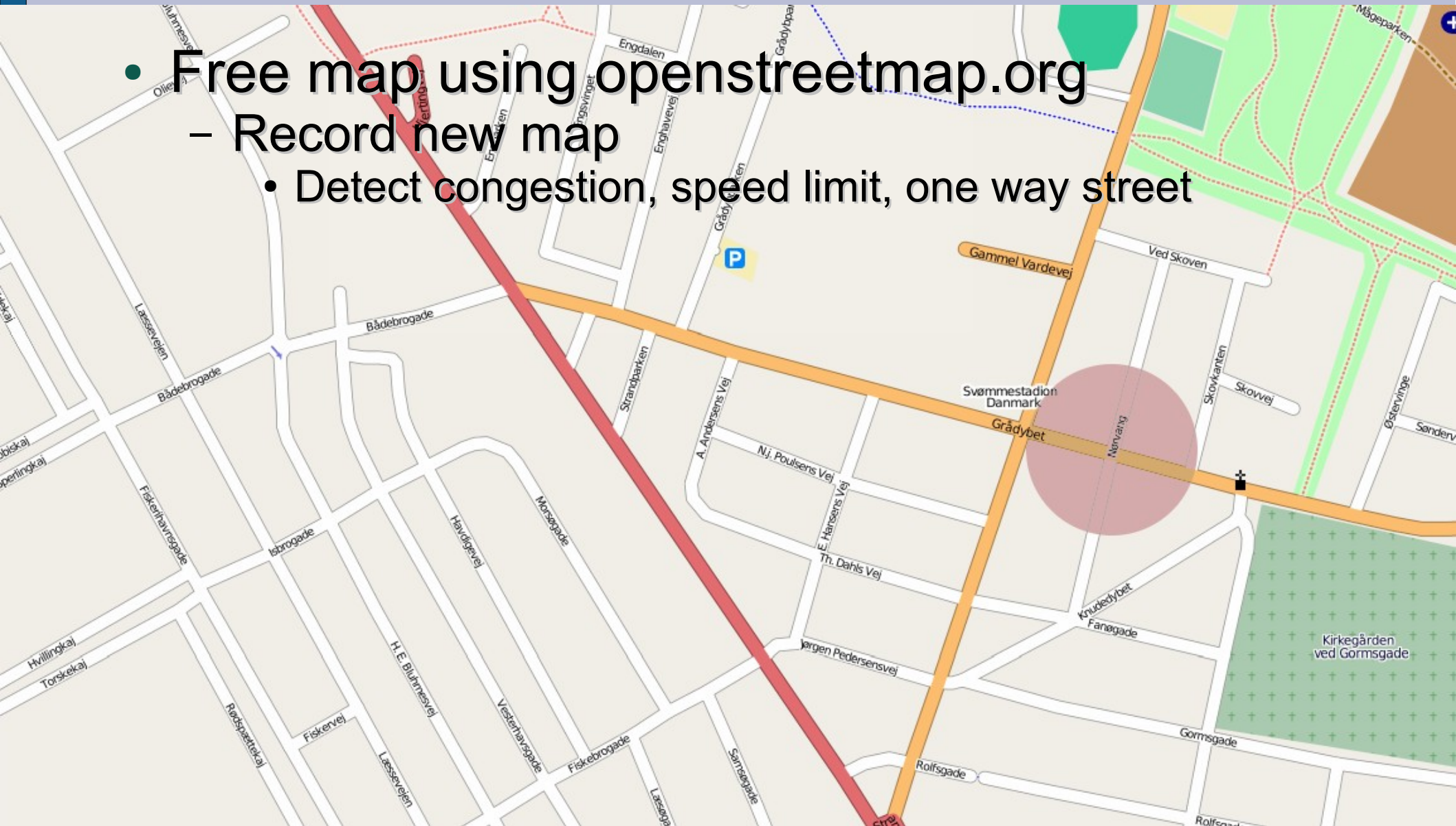
Idea: Closest *whatever*

- Users tag a location with information
  - E.g. gas prices, restaurant reviews
- The information is uploaded when internetaccess is available

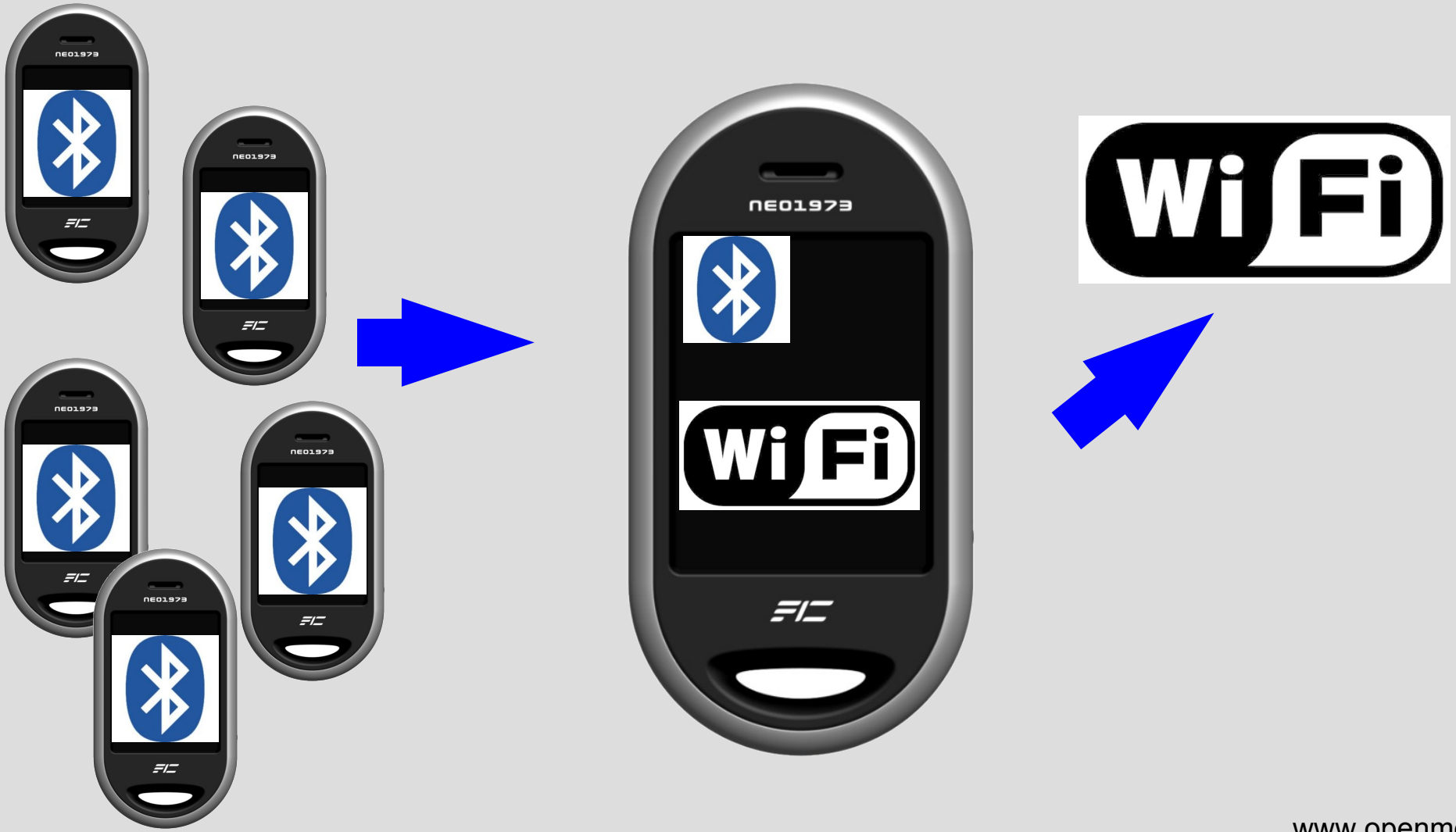
- Show a map with the nearest *whatever*

Idea: Navigation

- Free map using openstreetmap.org
  - Record new map
    - Detect congestion, speed limit, one way street



Idea: Bluetooth/WiFi gateway



Idea: Graphics Tablet

Idea: Profiles

- Time based
- Location based
- Timeout
  - Time based
  - GPS based
  - Motion based

Idea: Voice over IP

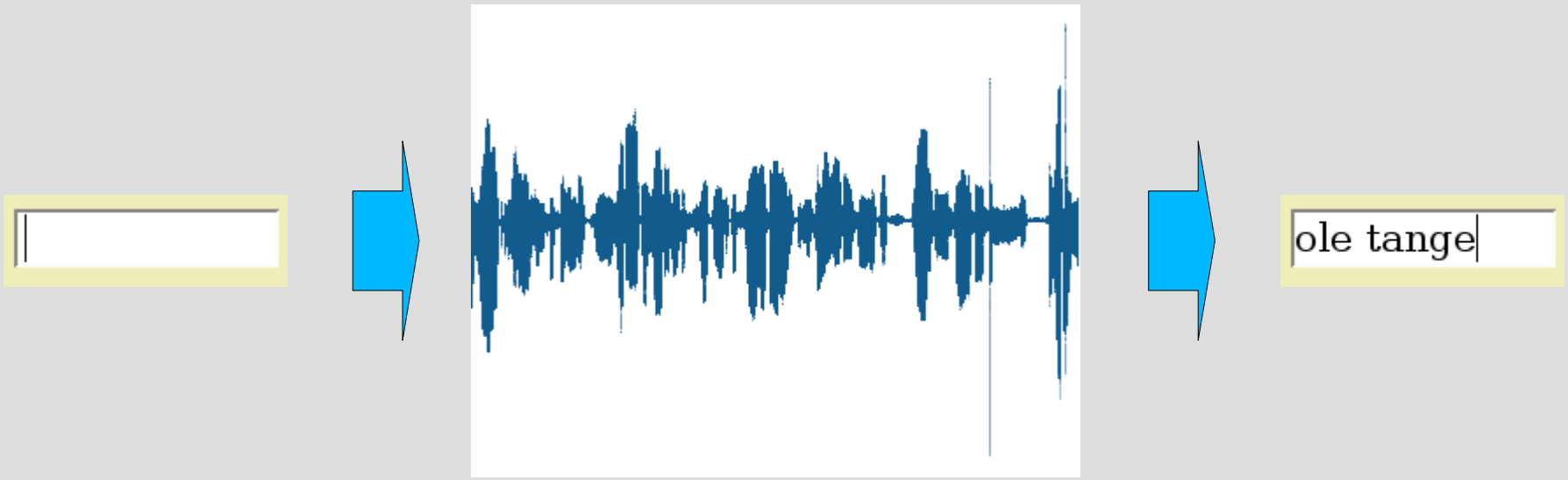
- Voice mail on the phone
- Asterisk

Idea: Firewalling

- Time based
- Location based
- White lists

Idea: VoiceText

- Text fields with dictation machine
- Secretary to do “voice recognition”



Idea: Dasher input

Idea: Distance meassuring

- Repeat and do a speedometer

Idea: Cheap data transfer

- Different subscriptions give different ideas

- Free voice
- Free data
- Free SMS
- Free call (but not minute)

Idea: Games

- Drainers'n'gainers

- My Account
- 3D Viewport
- Ambient Noise Detection
- Bootable USB device emulation
- Computer Mouse
- Data Traffic Monitor
- Dynamic Screen Orientation
- Graphics Tablet
- Ignore Call Button
- Least Cost Routing
- Set Local Time
- Synchronized High Quality Recording

Software patents

- The ideas might be patented
  - as software
  - as firmware
  - as hardware
- Help us fight software patents
  - English: Join www.eff.org www.ffii.org www.fsfe.org

Revolution IV: End user

- Packaging system
- Subscribe to
  - Stable
    - Tested and authorized by FIC
  - Experimental
    - Tested by FIC
  - Development
    - Works for me
  - Brick your phone

When and how much?

- 12th July 2007
  - Phase 1 device (GTA01B_v04): USD 300 (base model), USD 450 including additional development hardware
- 2008 Q1
  - Neo FreeRunner: USD 450 (base), USD 600 (including development hardware)

Your Mobile Lab for Experimentation.

Create New Building Blocks.

Summary

- The FIC Neo FreeRunner hardware
- The software
  - The ideas
- Price and availability
- Future developments

More info and short break

- www.openmoko.org
- wiki.openmoko.org

Questions?
<ole@tange.dk>