



**Mer: Reconstructing Maemo**  
**BoF Session @ 25.07.2009 – DebConf9**  
by Carsten Valdemar Munk



## Outline for this talk

- What is Maemo?
- maemo.org
- A call to reconstruct Maemo
- The Mer project
- Portability
- What is Mer?
- Differences from desktop/laptop distributions
- Demo
- Questions, Discussion, etc.

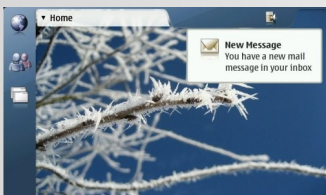


Maemo is a Debian GNU/Linux based embedded operating system designed for networked mobile devices, called Internet Tablets.



The user interface architecture is based on GNOME framework, especially on GTK+ widgets. GTK+ has been further extended by Hildon to better suit the needs of an Internet Tablet.

The actual user interface engine under GTK+ is X Window System (X Server) with Matchbox window manager. GUI applications are built using Hildon framework and GTK+ widgets.



The Maemo community is made by contributors interested in all kinds of collaboration around Maemo software.

Maemo community is a non-profit organization sponsored by Nokia, which is an active and equal member.

Anybody can join the Maemo community, contribute to the work, and provide transparent feedback.

The Maemo community meets at least once a year in the Maemo Summit (9-11 October 2009 in Amsterdam, NL)



Tablets are not under-powered embedded systems, they are powerful, power-efficient, economical handheld computers.



Make Maemo a general platform for tablet devices.



Make it more developer-friendly.  
More hackable.  
Align with standard Linux distributions.



Separate device and platform code



Open development of the Maemo platform - the device-specific and vendor-specific differentiation development can be closed.



It should be easy to port existing desktop applications - platform peculiarities should be kept to the absolute minimum required for the mobile use-case.



Mer is a maemo.org project, owned by the community, created by the community.



Currently SCRUM-like sprints consisting of 3 weeks of development and 1 week of testing with a release after each sprint



Open development, encouraging team awareness through microblogging



Flat management structure of volunteer mentors. Currently 40+ people participating off-and-on.



# Where has Mer been ported to?



Nokia 770



Nokia N800



Nokia N810



Fujitsu-Siemens Loox 720



Neo Freerunner



SmartQ 5



Beagleboard



Nintendo Wii



Sharp Zaurus



VMWare



Sun Virtualbox



QEmu



x86 PC





Mer is essentially a bunch of Debian packages and image generation scripts implementing a Maemo platform based on either Ubuntu or Debian.



The core Mer system is fully open source and cross-platform, open for anyone to adapt to their devices.



Mer is also meant as a research operating system for maemo.org to give the community a playground to develop concepts that could potentially be integrated into Maemo.



Mer is not meant as a competitor to Maemo – there's no Mer without Maemo.



Mer like Maemo focuses on power saving. A mobile device should be able to function several days always-connected – not 4 hours like a laptop.



Traditional tricks: docpurge, localepurge, in some cases cutting dependancies and/or features.



Like Maemo, Mer focuses on that a tablet has CPU, memory and bandwidth constraints – but it can be more powerful because of the environment surrounding it.

Hildon desktop should be a X session like GNOME, KDE, etc.

Changing settings and removing features of underlying distribution to better fit mobile usage

Separating the Nokia Internet Tablets-specific code into hardware support packages in order to increase portability between devices.

Removing reliance on the user running Hildon being 'user'.

Separating the Maemo OS from the Maemo UI.



## Easy porting:

Hardware support and Mer is separated

Made Hildon desktop a X session

Several patches made towards Maemo packages (Scratchboxisms, Maemoisms, Libtool, etc.)

The power of Ubuntu (or Debian) together with Maemo (based on Maemo 5.0 sources)

166 packages make out the Mer (part Maemo packages, part changes to existing packages, part glue to make it all fit together)



## Easy development

Developing for your mobile device is similar to developing for Debian.

Develop and test out your application on x86 – full device environment.

When you want to build, you can either do it -on device-. It's Debian, after all. Or use the OpenSUSE Build Service.

Based off Debian armel

80% of our packages build both for Debian and Ubuntu

Currently only UI ported

To complete a hardware port:

- Control panels (GPS, home applets, GSM, etc)

- Behaviour

- Statusbar (WiFi, GSM, Battery, etc.)

- we only provide the glue to put all this together.

Comes with web-browser, e-mail, most of Debian packages..