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University co-operation with Maemo SW

FRUCT seminar – Tampere 29.10.2008

Contents

- Maemo SW

- The upcoming Maemo 5 (Fremantle) release

- The meamo open source community

- The Maemo SW university co-operation model

  - Now

  - In the future

- Conclusion

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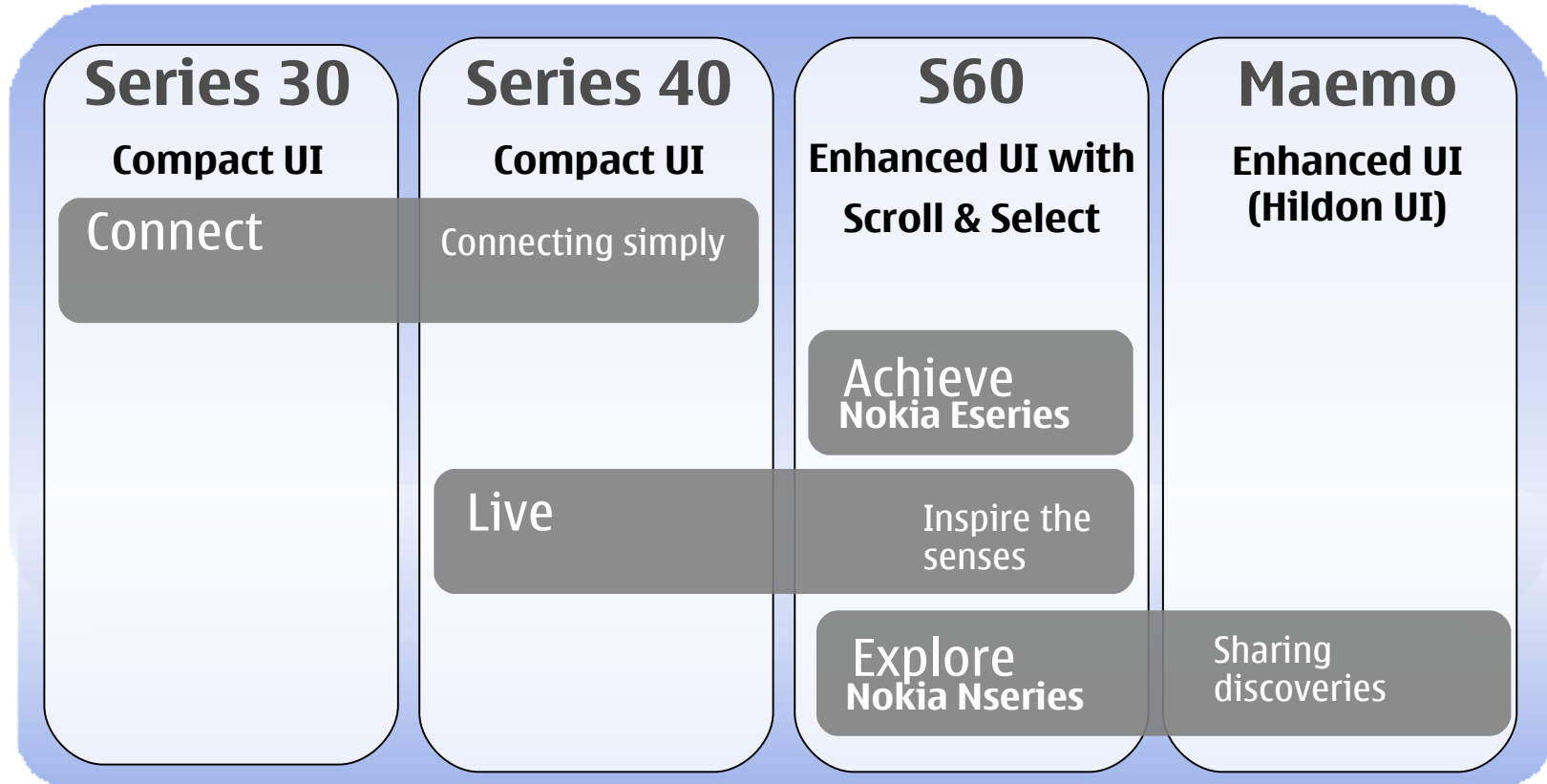**Solid software architecture on Linux** – **first in taking Linux desktop paradigm to mobile devices**

Optimized for Internet experiences – **first in taking web2.0 apps to mobile devices based on Linux**

Maemo

Designed for Mobile Internet Devices – **implementing the multimedia computer promise**
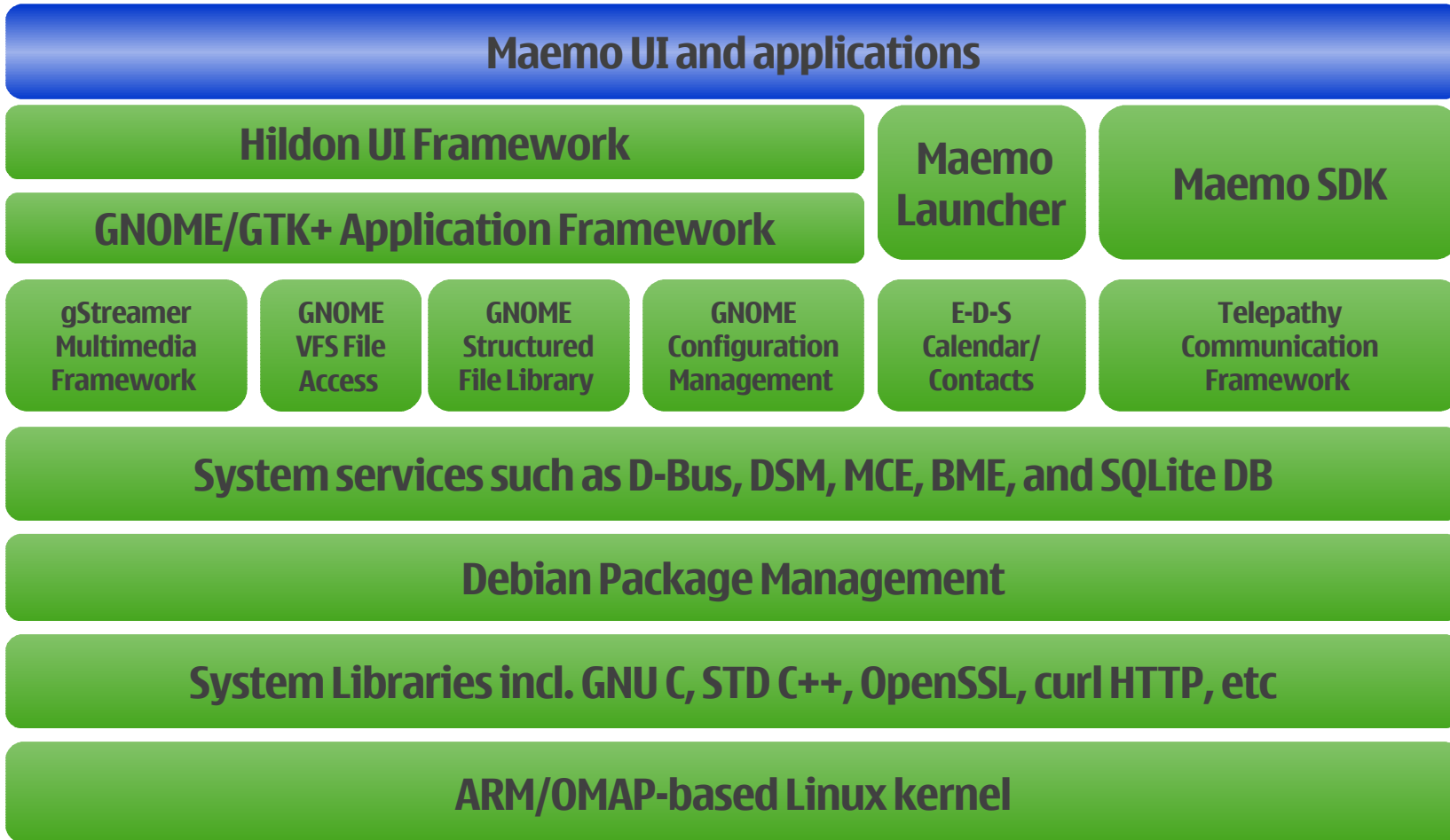
Open for innovation – **Developed with some of the best open source communities**

Maemo among Nokia device platforms

Series 30	Series 40	S60	Maemo
Compact UI	**Compact UI**	**Enhanced UI with Scroll & Select**	**Enhanced UI (Hildon UI)**
Connect	Connecting simply		
		Achieve **Nokia Eseries**	
	Live	Inspire the senses	
		Explore **Nokia Nseries**	Sharing discoveries

Maemo powers Internet-optimized multimedia computers.

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Maemo software architecture today

Maemo UI and applications

Hildon UI Framework

GNOME/GTK+ Application Framework

Maemo Launcher

Maemo SDK

gStreamer Multimedia Framework	GNOME VFS File Access	GNOME Structured File Library	GNOME Configuration Management	E-D-S Calendar/ Contacts	Telepathy Communication Framework

System services such as D-Bus, DSM, MCE, BME, and SQLite DB

Debian Package Management

System Libraries incl. GNU C, STD C++, OpenSSL, curl HTTP, etc

ARM/OMAP-based Linux kernel

Mostly binary code for Nokia devices

Maemo platform: Mostly open source except connectivity, power management and licensed software

Note: This is only a simplified illustration and not all components are shown. Components in the upper layers of the software stack may interface also with components in the lower stacks even if there is no direct connection visible here between those.

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Opportunities of new enablers in Fremantle release

HSPA mobile broadband support :

- **Assume nothing less than always online** when designing applications

OMAP3 high-performance processor support:

- **Computing-intensive applications without user-perceived delays**
- **Enabling up to 3X gain in performance** over ARM11-based processors
- **Encode and decode videos at DVD resolutions**

High-definition camera sensor:

- **Build anything you can imagine assuming a camera in the device:** from camera algorithm optimizations to photo sharing on the web

Meta Tracker:

- **built context and content search into your application**

HW-accelerated graphics with Open GL ES2.0 and Clutter:

- **Increase usability and embed stunning UI transitions into your application**

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maemo.org

maemo.org –
the community
for innovation on
Maemo.

140.000 unique visitors

14.000 registered users

700 hosted projects

200 applications

August 2008

maemo.org

maemo.org > Downloads > OS 2008

OS2008 (N810 + N800): 237 applications

Software for your Nokia Internet Tablet! Most of it installable in a single click and free as in beer & speech. Your ratings and comments help promoting the best software for maemo.

IMPORTANT: only the software labelled as **NOKIA** is provided by Nokia. All the rest is brought to you by independent developers.

The pearl
Maemo WordPy

Blogging software that hooks to WordPress and Blogger accounts, allows image uploads, post creating and editing, tagging. Especially notable for its finger-friendly menu.

Stars

Speccy - Sinclair ZX Spectrum Emulator — 8 votes

Zapys - Livejournal client — 6 votes

Additional keyboard layouts — 12 votes

ScummVM — 18 votes

Advanced Backlight — 24 votes

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OS images to reflash your tablet:
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maemo.org

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Welcome at garage.maemo.org!

This site is meant for hosting various software projects related to the maemo development platform.
If you have questions or looking for answers please check out **the FAQ page**. If you would like to open a project then the best is to read the **Getting Started document**.
IMPORTANT: Most projects hosted here are run by maemo community teams. **Official Nokia projects** are clearly identified as such.

Latest News

VNC Viewer now back in extra
Detlef Schmicker - 2008-08-04 11:51 - VNC Viewer
The diablo version of vncviewer is now in extras. A single click installation file is available

http://vncviewer.garage.maemo.org/vncviewer_diablo.install
(0 Comment) [Read More/Comment]

The latest and greatest
Andrew Zabolotny - 2008-08-02 06:56 - Zip - Unzip

garage Statistics

Hosted Projects: **650**
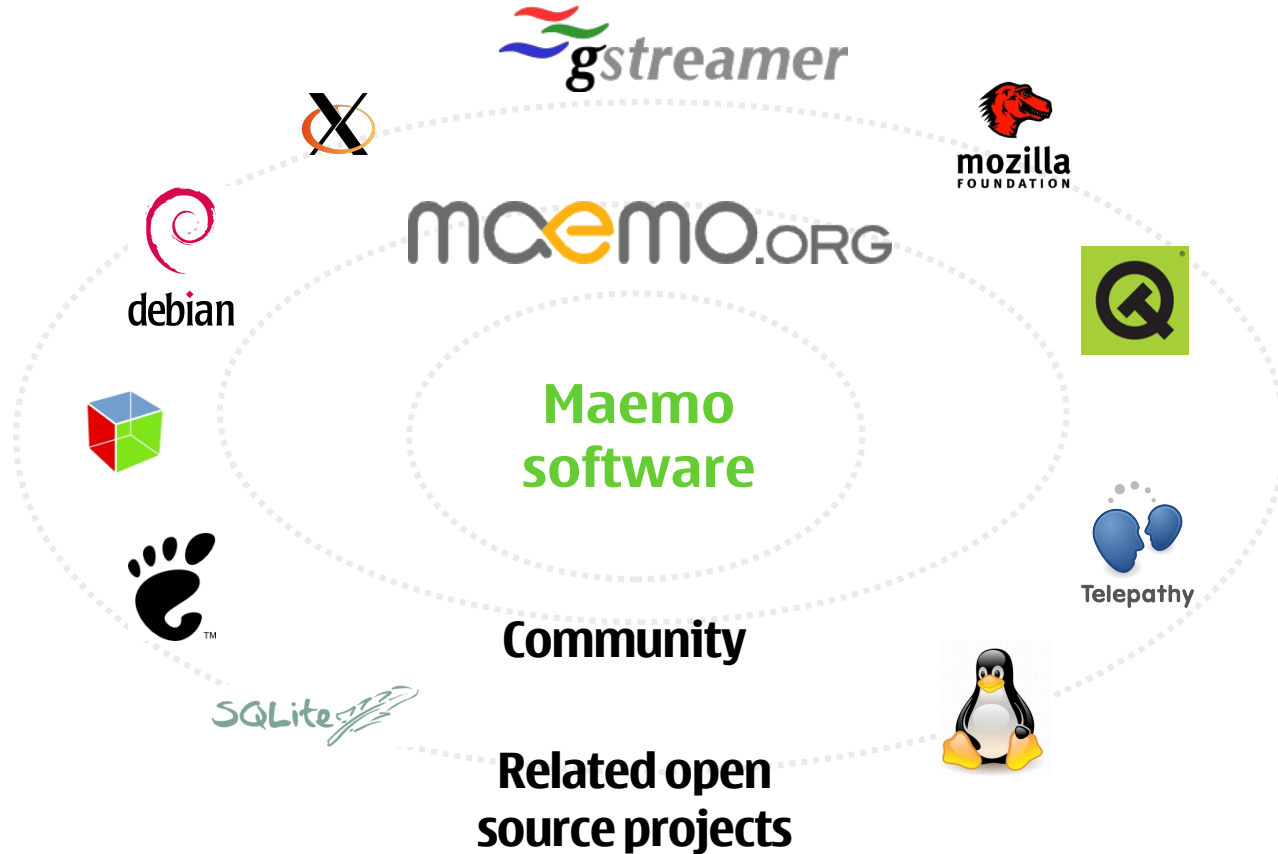Registered Users: **13,299**

Top Project Downloads

(108,815) Maemo Mapper
(55,149) UK Media Player
(54,487) Windows Vista N800/770 Theme
(49,734) Media Converter

Open for innovation – developed in collaboration with the open source community

14.000 members
700 hosted projects
200 applications

Nokia is a key contributor to projects such as GNOME/GTK+.

gstreamer

mozilla FOUNDATION

maemo.ORG

debian

Maemo software

Telepathy

Community

SQLite

Related open source projects

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Development resources for Maemo

Maemo SDK:

- The Maemo SDK creates a sandboxed development environment on a GNU/Linux desktop system largely built on the Scratchbox cross-compilation toolkit.

Maemo.org:

- Maemo.org website has a lot of different repositories that are meant to be used with standard Debian package installation tools.

- Documentation include tutorials, API references, manuals and several other guides.

Maemo online training:

- Maemo training courses provide an efficient overview of the tools and methodologies needed when developing applications and platform services.

Forum Nokia:

- Consulting and technical service for application development on Maemo

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Current university co-operation model

- Providing devices
- And on-line support to get the devices to good use
  - We are a small team and can't visit every university
- Many contacts in Nokia – benefits and more work
  - Naturally Nokia Research Center is a key contact to universities
  - Device units are usually more short term oriented

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General Objectives for university co-operation

- **Long-term objective** (3-5 years): To initiate and develop novel types of technologies, concepts and services that take a long time to develop and can be used in future versions of maemo platform.

- **Medium-term objective** (2-4 years): To create an environment for open innovation to boost novel types of functionalities through co-operation between maemo open source community, Nokia research labs, 3rd party companies and research organizations.

- **Short-term objective** (1-3 years): To raise the awareness of maemo platform and Nokia Linux devices as an integrated part of the developer and OSS community as well as to establish maemo as one of the platforms used for university education and research.

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Current Maemo Support For Research Projects

- maemo.org will provide own section for university cooperation
- maemo.org provides (now) following services and support for research projects
  - maemo Development Environment including documentation and examples
    http://maemo.org/development/sdks/ , http://maemo.org/development/documentation/
  - maemo Training Material to be used for basis of university mobile Linux courses
    http://maemo.org/development/training/
  - Garage open source project hosting to set up development environment for research projects
    https://garage.maemo.org/
  - Application catalog to publish stable versions of sw components for evaluation and feedback from maemo community
    http://maemo.org/downloads/OS2008/
  - Maemo mailing lists and community for technical support
    http://maemo.org/community/mailing-lists.html

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Future Maemo SW university co-operation

- Current model will change slightly
- More deeper relationships with selected universities
- Rethinking the support model for Maemo university courses
- Visits to university courses?
- More direct contacts between Nokia and university staff
- A site where universities interested in Maemo as a platform could exchange ideas?

- Other possible collaboration ideas?
    - We are open to suggestions

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Russian maemo.org site?

- Russia is a big market with a long tradition in computer science

- How about part of maemo.org in russian?

- maemo.org is a community site, so this can be done, if someone just does it

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Thank you for listening!

Any questions?

You can also later contact me:
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